

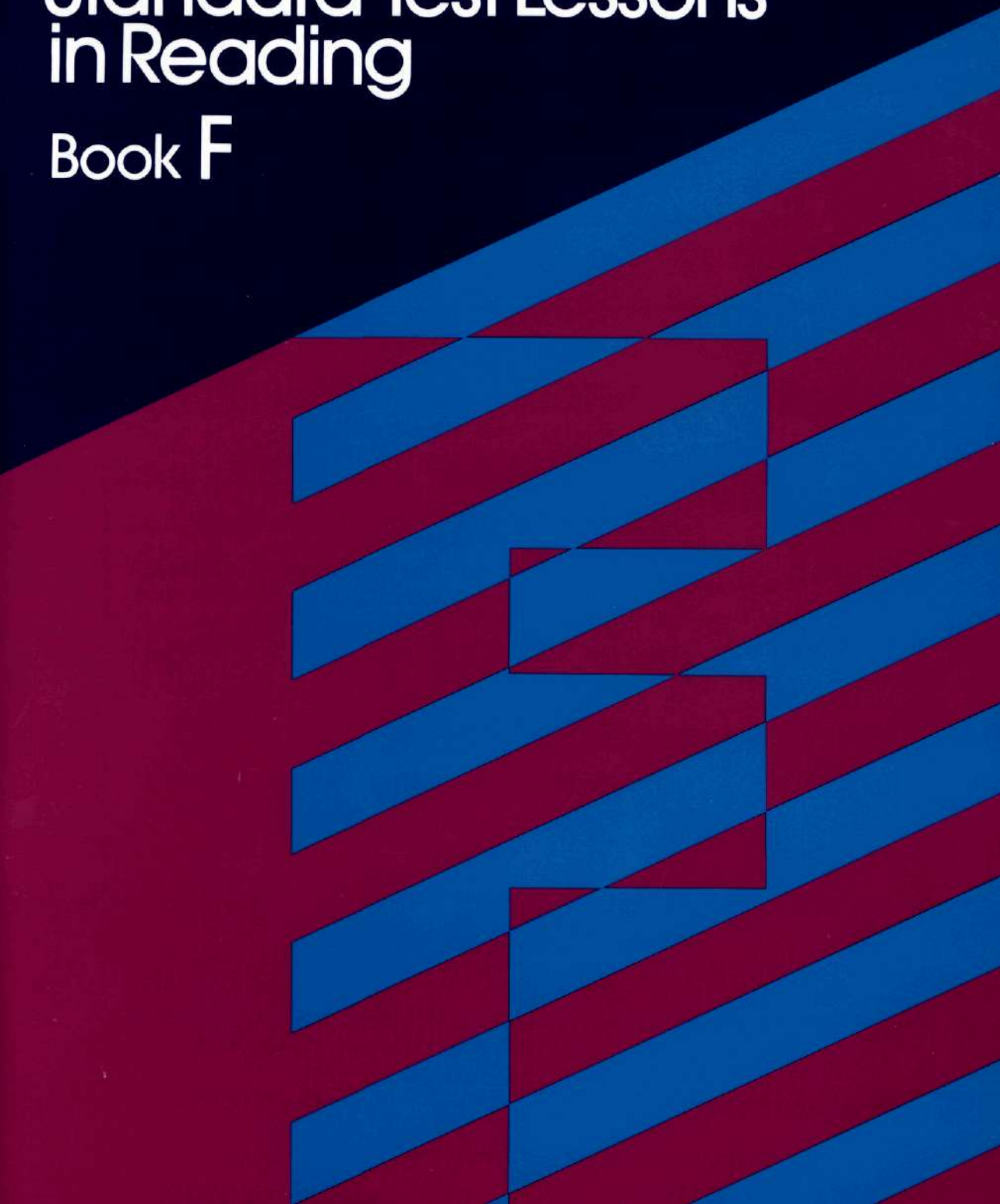
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McCALL-CRABBS

Standard Test Lessons in Reading

Book F



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The King of Shu had no arrows for his soldiers. Chu-ko Liang, the adviser of the king, promised to get five thousand arrows before the battle. It takes a long time to make so many arrows. The king thought it was strange that Chu-ko Liang did not tell the arrow-makers to start work. Chu-ko Liang would not tell his plan. He waited until the evening before the battle. At midnight he sent twenty boats covered with thick straw pads to sail around the enemy's camp. The enemy were frightened and shot many arrows at the boats. The arrows stuck in the straw. The boats sailed back, and Chu-ko Liang took out more than five thousand arrows and gave them to the king. The enemy had very few arrows left with which to fight.

1. To make thousands of arrows takes (A) one day (B) two hours
 (C) a long time (D) a short time
2. Chu-ko Liang got the arrows from the (A) enemy (B) factory
 (C) arrow-makers (D) general
3. Chu-ko Liang was the king's (A) cousin (B) friend (C) general
 (D) adviser
4. Chu-ko Liang sent the boats (A) the next morning (B) at the time of the
 battle (C) the night before the battle (D) the day after the battle
5. The enemy (A) ran away (B) were asleep (C) sent out boats
 (D) shot many arrows
6. The arrows (A) fell into the water (B) stuck in the straw (C) killed
 the men (D) fell on the ground
7. The boats were covered with (A) cotton (B) cloth (C) feathers
 (D) straw
8. What is implied rather than stated? (A) The king's adviser helped to win
 the war. (B) There was no way to get arrows. (C) Boats are not used
 during a battle. (D) The best time to fight battles is at midnight.

No. right
G score

1
2.5

2
3.0

3
3.7

4
4.3

5
5.1

6
6.0

7
7.0

8
7.9

There is a plant that lives on small flies and other insects that it catches in a trap of its own. It is called the pitcher plant because of the shape of its leaf. A fly is tempted by the sticky liquid on the sides to crawl down the pitcher-shaped leaf. When he has eaten a good meal and is ready to fly home, he finds that the top of the leaf is too narrow to let him spread his wings. Also on the sides there are little hairs, all pointing downward, and these keep him from crawling out. He clings to the leaf until he grows tired and must at last fall to the bottom of the pitcher plant, which is often partly filled with water. Here he must either starve to death or drown. Then the plant feeds upon the body.

1. The pitcher plant feeds upon Ⓐ leaves Ⓑ insects
 Ⓒ sticky liquid Ⓓ little hairs
2. The plant's name comes from the Ⓐ shape of the leaves Ⓑ hairs
 Ⓒ sticky liquid Ⓓ way it eats
3. The fly is tempted by the Ⓐ hairs Ⓑ shape of the leaf Ⓒ color of the leaf
 Ⓓ sticky liquid
4. The fly crawls down the leaf in order to Ⓐ play Ⓑ fly Ⓒ eat
 Ⓓ walk
5. The fly cannot fly out because Ⓐ he is heavy Ⓑ the top is too narrow
 Ⓒ of the water Ⓓ he is tired
6. The bottom of the pitcher plant often has Ⓐ hairs Ⓑ leaves
 Ⓒ water Ⓓ dirt
7. The fly finally Ⓐ flies out Ⓑ dies Ⓒ crawls out Ⓓ eats its way out
8. The plant Ⓐ helps the fly to crawl out Ⓑ keeps the fly from dying
 Ⓒ helps the fly to fly out Ⓓ feeds upon the fly's body

Since the sun is a star and there are billions of other stars in the universe, there may be billions of planets like our earth. Each of these may be inhabited by beings similar to humans. If so, perhaps some of these inhabitants are more intelligent than we are. After all, we are not very intelligent when we seek to destroy each other by war.

We are already traveling through space. We may soon visit Mars and other planets in our solar system. Perhaps we will even visit the planets of other solar systems. Therefore, it should not surprise us that many reputable persons claim they have seen flying saucers and space ships. A fleet of such ships was reported seen over Washington, D.C., one night by air pilots and observed on several radar screens.

If space ships do exist, it may be that their occupants are scouting us. Could it be that the inhabitants of another planet are planning to move to ours? Possibly they already know that we have discovered the secret of space travel and will try to visit their planet. The so-called creatures from outer space have never caused harm to anyone on our earth, but they may have been watching us kill each other in great foolish wars and think that we would not make desirable neighbors on their planet!

1. The sun is a (A) planet (B) star (C) comet (D) solar system
2. About how many stars are in our universe? (A) billions (B) one billion (C) millions (D) thousands
3. The writer thinks that humans are (A) extremely intelligent (B) foolish (C) all reputable (D) desirable on other planets
4. What planet in our solar system is mentioned? (A) Jupiter (B) Venus (C) Mars (D) Saturn
5. A fleet of space ships was reported seen from (A) the sun (B) Mars (C) Virginia (D) Washington, D.C.
6. The inhabitants of other planets may be (A) studying us (B) destroying us (C) killing each other (D) harming people on our planet
7. How many space creatures have caused harm to humans? (A) one (B) none (C) several (D) many
8. How does the writer think other planets may feel about having us visit? (A) they would welcome our intelligence (B) they may not want us because we make war (C) they want to discover our secrets (D) they think we are very desirable

The game of piñata is played in Mexico, especially around Christmas. Families gather to eat, sing, dance, and have a merry time. For the children the best part is when they break the paper piñata and scramble for the candy, nuts, and other treats that fall out. Piñatas come in all shapes. Clusters of fruit and flowers, and animal and bird forms are the most popular.

An adult throws the end of a rope attached to the piñata over a branch of a tree or a beam in the ceiling. This person can pull the piñata up and down during the game. The children are blindfolded and are brought in near the piñata one at a time. Each child is spun around three times and then told to hit the piñata with a stick. The adult usually jerks the piñata out of reach until each child has had at least one try. Then the game is made a little easier by lowering the piñata. It may not burst open the first time it is hit, but as soon as it does all the children take their blindfolds off and scoop up as many of the goodies as they can. The game is also played in Spain, India, and in some Latin American countries. In some places children break three piñatas—one filled with old shoes, one with rice, and one with candy.

1. In Mexico, the game of piñata is associated with Ⓐ birthdays
 Ⓑ dances Ⓒ Christmas Ⓓ family dinners
2. The piñata is made of Ⓐ candy Ⓑ paper Ⓒ rope Ⓓ the branch of a tree
3. What is inside the piñata? Ⓐ flowers Ⓑ animals Ⓒ birds
 Ⓓ sweets and small toys
4. The children are blindfolded so they cannot Ⓐ see Ⓑ grab the rope Ⓒ find the stick Ⓓ eat all the candy
5. If they play indoors, the piñata is hung Ⓐ over the table Ⓑ from a beam in the ceiling Ⓒ from the Christmas tree Ⓓ over the window
6. What usually happens when the children take their first turn? Ⓐ the piñata breaks Ⓑ the adults make merry Ⓒ the piñata is spun around three times Ⓓ they miss hitting the piñata
7. When the gifts shower down, the children Ⓐ take turns picking treats Ⓑ pull the piñata up and down Ⓒ all pick up as much as they can Ⓓ fill old shoes with rice
8. Piñatas Ⓐ can be made in all shapes Ⓑ are all made in Mexico
 Ⓒ are only played with at Christmas Ⓓ are unknown in countries south of Mexico

Sand painters learn their art from centuries of Native American rituals. The tradition of sand painting comes from the colorful sandstone deserts of the southwestern United States. The Zuni and Navajo peoples have used sand painting in healing ceremonies. Today many artists paint with sand just as they would paint with oil or watercolor paints.

Different colored soft stones are ground into a fine sand and put into bags or jars. Often a sand painter will use other natural materials, such as ground cornmeal, flower pollen, roots and barks of trees. The more colored sands the artist has, the more interesting and beautiful the creation will be.

Native American sand painters clear a smooth place on the dirt floor of a hut and paint pictures of Mother Earth and Father Sky. They often chant prayers while they are creating the sand painting. After twelve hours, they collect the sands from the earth floor and scatter them in all directions. Their belief is that this preserves the power of the sand painting prayer.

1. Which Indians have used sand painting for healing? (A) Cherokee and Cheyenne (B) Mohawk and Algonquin (C) Navajo and Zuni (D) Crow and Shoshoni
2. Which art medium is not mentioned in this story? (A) oil paint (B) water colors (C) crayons (D) colored sand
3. Sand for the sand paintings is obtained from (A) grinding stones and other natural materials (B) grinding clay and mud (C) dyed particles of glass (D) threads of silk cloth
4. The tradition of sand painting comes from what part of the U.S.? (A) northeast (B) northwest (C) southeast (D) southwest
5. Native American sand painters create their paintings on (A) rocks (B) dirt floors (C) animal hides (D) ceilings
6. One of the most well-known Native American sand paintings is a picture of (A) cactus blossoms (B) sandstone cliffs (C) Mother Earth and Father Sky (D) prairie dogs
7. Native American sand painters destroy their paintings after (A) 12 hours (B) 24 hours (C) 5 days (D) 1 year
8. Although sand painting came originally from centuries of Native American rituals, it is now (A) done only by the Navajo peoples (B) done only by the Zuni peoples (C) hardly ever done by Native Americans any more (D) used by artists from all over

No. right
G score

1	2	3	4	5	6	7	8
4.2	4.6	5.2	5.7	6.3	6.9	7.4	8.1

If you live in the country, or visit the country, or have much to do with dogs, rabbits, sheep, or other animals, look out for ticks in the summer. A tick, attached to an animal or a human being, will suck the blood and swell to half an inch in size. It then bursts, scattering thousands of young ticks. If one gets on you, no special harm will be done unless it is a wood tick that has been on some person or animal that had Rocky Mountain spotted fever. Even if the tick is infected, little harm will result provided you find it early. If it is not found early, you may catch this spotted fever. Remove and kill any ticks you find on your pets, and look out for ticks on yourself when undressing or bathing.

Should you find a tick on yourself, and if red spots appear on your wrists and ankles, you may have Rocky Mountain spotted fever. Go to a doctor as quickly as possible, and follow his instructions.

1. What will information concerning ticks do for us? (A) frighten
 (B) hurt (C) please (D) warn
2. Ticks are most likely to be found on (A) humans (B) birds
 (C) animals (D) fish
3. A full-grown tick may breed how many young ticks? (A) dozens
 (B) hundreds (C) thousands (D) millions
4. The story says you should remove the tick from yourself (A) in a day
 (B) any time (C) in two days (D) early
5. A tick may be found on (A) any animal (B) short-haired animals only
 (C) long-haired animals only (D) smooth-skinned animals only
6. What should you do if you find ticks on your pet? (A) kill the animal
 (B) take it to a doctor (C) kill the tick (D) scatter them
7. Most ticks (A) will give you Rocky Mountain spotted fever (B) are harmless
 (C) live in cities (D) go for your wrists and ankles
8. If red spots appear on your wrists and ankles (A) go to bed at once
 (B) take a hot bath (C) consult a doctor immediately (D) wash the spots

1. **Acapulco is in** A Mexico B Cuba C Puerto Rico D Brazil
2. **The cliffs from which the divers leap are** A 37 meters high
 B 16 meters high C 27 meters high D 77 meters high
3. **The divers get to the diving rock** A by climbing a ladder B by
 climbing a long knotted rope C by climbing up the rocky cliff D by
 going up steps
4. **When they get to the top the divers** A do jumping jacks to warm up
 B say a prayer for a safe dive C wait for the moon to come out from
 behind the clouds D count to one hundred
5. **As they dive into the sea some divers** A scream B carry torches
 C shoot flare guns D hold their noses
6. **The tourists** A carry torches B watch the spectacle C say a
 prayer D bob to the surface
7. **The water the divers dive into is** A rough and not deep B shallow
 and calm C rough and deep D wide
8. **According to the selection, cliff diving is dangerous because the divers**
 A could be attacked by sharks B could be pulled out to sea by the
 strong waves C could get tangled in sea weed D could hit the rocks

No. right G score	1	2	3	4	5	6	7	8
	2.3	2.7	3.5	4.3	5.2	6.2	7.2	8.4

Carroll Chatham was a freshman in high school when he determined to get rich quick by making gems. At first he thought he would make diamonds, but when he learned that emeralds cost more, he decided he would make emeralds instead. He did not know at the time that one of the largest gem companies in the world had tried to do this very thing and failed.

He read everything he could find about emeralds. He experimented year after year. At last he produced a stone that looked like a pure emerald. Unfortunately, he had not kept exact notes on what he had done, so he had to try again and again before he rediscovered the formula.

Mr. Chatham had a small windowless laboratory that carefully guarded his secret. Here he produced "emeralds" so much like those nature creates that many of the world's gem experts could not tell them apart. He could make small "emeralds" or large ones. He made one the size of a large lemon and gave it to the Smithsonian Institution in Washington, D.C. Ask to see it when you visit there some day.

At the time he was producing more "emeralds" than all the mines in the world, he was also working at another job for \$125 a month. When he resigned, he startled his employer by saying that his year's salary from the position was not enough to pay his income tax.

1. This is the story of a person who Ⓐ made synthetic gems
Ⓑ invented machinery Ⓒ wrote secrets Ⓓ cut stones
2. Chatham's secret was guarded in Ⓐ his mind Ⓑ a vault Ⓒ the ground
Ⓓ a windowless laboratory
3. Chatham finally decided to make Ⓐ diamonds Ⓑ emeralds
Ⓒ rubies Ⓓ pearls
4. At one time this man was producing more emeralds than Ⓐ he dreamed possible
Ⓑ he could sell profitably Ⓒ all the mines in the world
Ⓓ exist in the earth
5. Chatham was also working at another job for how much a month?
Ⓐ \$125 Ⓑ \$150 Ⓒ \$175 Ⓓ \$200
6. The man's salaried job Ⓐ paid him well Ⓑ took too much time
Ⓒ was not profitable for him Ⓓ was difficult
7. Carroll Chatham gave the government a gem the size of
Ⓐ a basketball Ⓑ an apple Ⓒ a baseball Ⓓ a lemon
8. Chatham gave a huge emerald to Ⓐ the Smithsonian Institution
Ⓑ his sweetheart Ⓒ his best friend Ⓓ the National Association

From the Greeks we get the story of Narcissus, the beautiful youth who was loved by the nymph, Echo.

When Narcissus scorned her love, as he did the love of all maidens, Echo died. Only her sad voice is left to give back the last word to anyone who calls her in the hills.

In order to punish Narcissus for his heartlessness, Aphrodite, goddess of love, caused him to fall in love with his own image, which he saw mirrored in the depths of a woodland pool. Thinking the reflection was a beautiful water nymph, Narcissus put out his arms to her, but, when he tried to touch her, there was only water in his hands and she had vanished from his sight. Again and again he tried to embrace her, but always she eluded him. Finally, because he loved her so hopelessly, he died of a broken heart.

The gods then changed Narcissus into the sweet white or yellow flower that bears his name.

1. Echo was a (A) youth (B) nymph (C) goddess (D) reflection
2. In regard to Echo, Narcissus was (A) kind (B) sad (C) heartless
 (D) loving
3. Aphrodite was the goddess of (A) love (B) war (C) peace
 (D) wisdom
4. Narcissus thought his reflection was (A) a man (B) a nymph (C) a
 goddess (D) himself
5. Narcissus fell in love with (A) Echo (B) Aphrodite (C) his own
 image (D) himself
6. He tried to embrace his reflection (A) once (B) never
 (C) occasionally (D) repeatedly
7. Narcissus died because (A) Echo did not love him (B) Echo died
 (C) his heart was broken (D) he wanted to go to Echo
8. Narcissus was changed into a (A) breeze (B) name (C) voice
 (D) flower

Issa was born in Japan in 1762. He was a lonely and unhappy child, but he did not speak of unhappiness. Instead, he spent hours talking to the simplest creatures about the most profound thoughts. He would talk to a frog, for instance, about how strange it was that when people are here, we don't pay much attention to them, but when people go, we feel lonely and wish they were here again.

Issa's mother died when he was very young, and he was raised by a mean stepmother. Issa's father was kind but cowardly, and he sent Issa away to school when he was fourteen. Perhaps he thought that getting away from his stepmother would help Issa grow strong on his own. When his father died, Issa was supposed to inherit his property, but his wicked stepmother made a deal with village officials and kept the property to herself for many years.

When he was a young man, Issa remembered the thoughts and conversations with simple creatures he had had as a child. He wanted to be able to express these thoughts most simply, so he studied the Haiku poetic form. He became very famous for his Haiku poetry and eventually returned to his hometown to claim his inheritance.

Children especially love Issa's poetry because he wrote about all his childhood companions such as frogs, fleas, flies, crickets, snails, and fireflies. He wrote nearly one thousand poems about these small insects who were his friends.

1. Issa was born in 1762 in (A) China (B) India (C) Japan (D) Russia
2. Issa spent most of his childhood (A) thinking deep thoughts and talking to insects (B) talking to his brothers and sisters about his mean stepmother (C) writing poems (D) fishing and sailing in the river by his home
3. Issa would think mostly about such things as (A) dinner that night (B) science and technology (C) being a soldier when he grew up (D) why we miss people when they are gone
4. Issa was prevented from claiming his inheritance because (A) his mean stepmother found a way to keep it from him (B) he became seriously ill while he was away at school (C) he and his father had a serious disagreement (D) he left Japan and travelled in China
5. Issa became famous for his (A) paintings (B) sword play (C) Haiku poetry (D) novels
6. One of the favorite subjects in Issa's poetry would be (A) a horse (B) a spider (C) a girl (D) a bridge
7. About how many Haiku poems did Issa write about his small friends?
(A) 500 (B) 50 (C) 100 (D) 1000
8. Haiku is (A) the name of a poet (B) a simple poetry form (C) an insect (D) a place in Japan

Edgar Allan Poe is a famous American writer who was born nearly 200 years ago. He is best known for his frightening short stories and a poem called *The Raven*.

Poe probably wrote such strange stories and poetry because he had a very sad life. It seemed that everyone he loved he lost, and the deaths of his mother, his foster mother, and his young wife, Virginia, all haunted him. He also had a terrible drinking problem that affected his work. The fact that he never had enough money to pay his debts made his life even worse.

After years of misery, he became engaged to a woman who had plenty of money and wanted to help him, but three weeks later he was found dead in a voting booth in New York City.

While he was alive most people didn't think Edgar Allan Poe was a great writer, but today we look at him as the father of the mystery story. Many of his stories have been made into movies such as *The Fall of the House of Usher* and *The Pit and the Pendulum*.

1. **Edgar Allan Poe** Ⓐ is still alive Ⓑ lived 100 years ago Ⓒ was born about 200 years ago Ⓓ wrote 500 years ago
2. ***The Raven* was** Ⓐ a detective story Ⓑ a poem Ⓒ a mystery story Ⓓ a movie
3. **Edgar Allan Poe wrote** Ⓐ short funny stories Ⓑ mystery stories Ⓒ situation comedies Ⓓ plays
4. **According to the selection Poe's life was full of** Ⓐ unhappiness and trouble Ⓑ fun Ⓒ travel and excitement Ⓓ love
5. **Poe finally found a woman who would help him and** Ⓐ lived happily ever after Ⓑ was found dead three weeks later Ⓒ became rich and famous Ⓓ gave up writing
6. **Today Poe is regarded as** Ⓐ the father of many famous writers Ⓑ the father of short plays Ⓒ the father of mystery stories Ⓓ the father of Edgar Allan Poe, Junior
7. **In his lifetime, Poe was** Ⓐ a very famous writer Ⓑ wealthy Ⓒ unknown by most people Ⓓ very happy
8. **A title of one of Poe's stories mentioned in the selection you just read is**
 Ⓐ *The Black Cat* Ⓑ *The Pit and the Pendulum* Ⓒ *The Raven*
 Ⓓ *The Cask of Amontillado*

No. right
G score

1	2	3	4	5	6	7	8
3.7	4.3	5.0	5.6	6.4	7.2	7.9	8.8

The streets of Rome and every other city and town in Italy were completely deserted for nearly two hours. There were no cars or buses, and traffic policemen had left their posts. Stores and cafés had pulled down their iron shutters. Fifty million Italians took sudden refuge in their homes. It was eerie. What had happened? Was it a war or an attack from outer space?

It was a live television transmission of the Soccer World Cup game between Italy and France. When the Italians came from behind and won 2 to 1, there was a deafening explosion of sound. The streets were suddenly filled with cars crammed with fans of all ages. Some were shouting and waving Italian flags and honking their horns, while others blew trumpets and beat on drums.

1. For almost two hours the streets of Italy were Ⓐ empty Ⓑ a desert
 Ⓒ full of traffic Ⓓ exploding
2. What happened to the traffic police? Ⓐ they were directing the cars and buses
 Ⓑ they were in the streets Ⓒ they left the post office
 Ⓓ they were inside watching TV
3. Who were in their homes? Ⓐ 50,000 Italians Ⓑ refugees
 Ⓒ 50,000,000 soccer fans Ⓓ the Italian soccer team
4. The stores were Ⓐ open Ⓑ made of iron Ⓒ closed Ⓓ all cafés
5. Why were the streets deserted? Ⓐ everyone was watching the game on TV
 Ⓑ the people had gone to play soccer Ⓒ there was a war with France
 Ⓓ people were shut in the stores and cafés
6. The explosion was caused by Ⓐ an attack from outer space Ⓑ the iron shutters
 Ⓒ the deafening television transmission Ⓓ the sounds of the soccer-crazy people
7. The fans were shouting because Ⓐ their side won the game Ⓑ Italy was behind 2 to 1
 Ⓒ the streets were crammed with cars Ⓓ France had taken the Soccer World Cup
8. Why were there horns, trumpets, flags, and drums? Ⓐ there was a parade
 Ⓑ the soccer game on TV was cut off Ⓒ the Italians were celebrating their team's victory
 Ⓓ Italy won the war with France

Several times I've wintered at Point Barrow, the most northerly tip of the American continent. It's about four hundred miles north of the Arctic Circle, but it isn't as cold as it sounds. In fact, last winter, when I was battling with the blizzards in New York City, I began to feel lonesome for a Barrow winter, where the snow is so fine and powdery that it seems to blow away without troubling anyone very much.

Dog teams and reindeer are used for winter travel up there, but the fastest and most exciting way to get over the snow crust is by ski-boat. You strap a pair of skis to your feet and a square sail to your back. I've made from twenty-five to thirty miles an hour that way under favorable conditions.

About five hundred Eskimos winter there. They are great storytellers and dancers. Many of their tales center around the old whaling days, when sometimes whaling vessels were caught in the polar pack off the Point. Many ships, ground to splinters by the ice, furnished luxuries to the Eskimos who salvaged their cargoes.

1. **Point Barrow is** (A) an island (B) near the Arctic Circle (C) the northern tip of North America (D) inland
2. **In the winter, the writer** (A) liked battling blizzards (B) missed being in Barrow (C) felt lonesome for New York City (D) is troubled by fine, powdery snow
3. **Dog teams are used for** (A) ski-boats (B) whaling (C) reindeer (D) transportation
4. **Ski-boating is** (A) troubling (B) exciting (C) done with vessels (D) a luxury
5. **The Eskimos like to** (A) get caught in the polar pack (B) go thirty miles an hour (C) tell stories (D) work on whaling vessels
6. **The old ships were sometimes** (A) luxuries (B) carrying ice (C) the fastest way to get over the snow crust (D) totally wrecked
7. **What would the Eskimos do with the cargoes?** (A) rescue it and put it to good use (B) dance on it (C) sell it in New York City (D) use it for making ski-boats
8. **Why was the cargo a luxury for the Eskimos?** (A) because they tell stories about it (B) because they live in a remote area and can't get the things easily (C) because they are in the salvage business (D) because the cargo gives them great wealth

No. right
Score

1
3.9

2
4.6

3
5.2

4
5.8

5
6.6

6
7.3

7
8.1

8
9.0

There are giant telescopes which look so far into the universe that it takes light two billion years to reach the lens. These telescopes have revealed that stars do not exist by themselves. They are grouped into galaxies. Our sun, which is a very ordinary star, is part of a galaxy including about a billion stars. Both our sun and tiny earth are far out toward the edge of this galaxy. In the beginning, our sun was not even there, for scientists believe it is a billion years younger than the oldest star in our galaxy.

Some galaxies are spiral-shaped. The galaxy that includes the earth is one of these. It is a hundred times as wide as it is thick. We see the Milky Way when we look lengthwise through the stars in our galaxy. Some galaxies are elliptical. Some are shaped like a sphere. A few have irregular shapes. Most are either spiral or elliptical.

When people look as far as our biggest telescopes will reach, they do not see the edge of the universe. Galaxies, each with its own millions of stars, extend much further than our telescopes can see. Recently it was discovered that radios with special antennas could pick up radio signals from galaxies far beyond the reach of telescopes.

Radio signals are very strong from a certain spot in the universe. When the world's largest telescope was turned on this spot, two galaxies were discovered colliding.

1. Choose the best title: (A) Suns (B) Moons (C) Galaxies (D) Earth
2. Special radios with special antennas can pick up radio signals (A) as far as telescopes can (B) beyond the reach of telescopes (C) not as far as telescopes can (D) almost as far as telescopes can
3. When we look lengthwise through the stars in our galaxy we see the (A) sun (B) moon (C) earth (D) Milky Way
4. Our galaxy's shape is (A) spherical (B) spiral (C) elliptical (D) irregular
5. Our galaxy is how many times as wide as it is thick? (A) hundred (B) thousand (C) million (D) billion
6. Most galaxies are (A) spiral or spherical (B) just spherical (C) spiral or irregular (D) spiral or elliptical
7. Our sun and earth are located in which part of our galaxy? (A) in the middle (B) on top (C) near the edge (D) at the bottom
8. Which statement is true about our sun? (A) It is the oldest star in our galaxy. (B) It is a billion years older than the earth. (C) Its light takes two billion years to reach us. (D) It did not exist at the birth of our galaxy.

On a dark, stormy night, the oddest sea battle in history was fought. The United States destroyer *Borie's* depth charge forced a German submarine to the surface. *Borie* trained its searchlight on the submarine and raced toward it with all guns firing. The submarine answered with a torpedo from its stern. It missed. *Borie* raced on to ram the submarine. Just as the crew braced themselves for the crash, the submarine swerved sharply, and a huge wave lifted *Borie* and gently deposited it on top of the submarine, pinning down one end of it.

For ten minutes, the two crews fought each other with pistols, knives, and even empty shell cases. Then the ships worked apart. The submarine fled, leaving *Borie* with its engine room half flooded. The destroyer took up the chase, trying both to keep away from those torpedoes from the stern of the submarine and to get into position to ram. The submarine, shorter than *Borie*, kept turning sharp left circles, with *Borie* circling after.

1. This sea battle was fought (A) in the morning (B) at noon (C) in late afternoon (D) at night
2. *Borie* was a (A) submarine (B) destroyer (C) battleship (D) cruiser
3. *Borie* was deposited on the submarine by (A) a torpedo (B) the wind (C) a huge wave (D) a storm
4. The two crews fought at close hand for how many minutes? (A) five (B) ten (C) fifteen (D) twenty
5. The clinging together of the two boats was (A) planned by the *Borie* (B) planned by the submarine (C) planned by both boats (D) a surprise to both boats
6. Soon after the two ships parted, the destroyer's engine room was flooded (A) not at all (B) one-fourth (C) one-half (D) three-fourths
7. The destroyer was (A) shorter than the submarine (B) the same length as the submarine (C) longer than the submarine (D) smaller than the submarine
8. After the ships worked apart, *Borie* (A) fled (B) turned in sharp left circles (C) chased the submarine (D) torpedoed the submarine

Some years ago, on the twenty-sixth of April, when I was tramping through the woods near a small lake north of Mineola, Long Island, I found the nest of a pair of wood ducks. The wood duck differs from most ducks in the site it chooses for a home. Other ducks nest on the ground among reeds and thickets, but this one builds in the hollow of a tree, using feathers and soft, decayed wood. The nest that I found was in an old maple tree that had partly fallen over, so that the trunk made an incline. It was just about forty feet above the ground.

I did not go near this nest again until the middle of May. Then, as I expected, I discovered that the young were hatched. To my surprise, I also discovered that the father bird, who should already have departed for other feeding grounds, was still in the vicinity. He was a handsome fellow, two-thirds the size of the mallard or the black duck, iridescent all over, marked with greenish blue on his head, and with golden brown and black on his sides. The possession of all this distinguishing beauty amply justified the proud way in which he was swimming on the pond.

1. The story is about Ⓐ a male wood duck Ⓑ black ducks Ⓒ wood ducks Ⓓ a man
2. Wood ducks are different from most ducks in Ⓐ their nesting place
Ⓑ color Ⓒ the way they fly Ⓓ size
3. The nest was Ⓐ on the ground Ⓑ in the fork of a limb Ⓒ in the hollow of a tree Ⓓ in a bush
4. Which number of feet is most nearly the distance of the nest above the ground? Ⓐ thirteen Ⓑ seventeen Ⓒ twenty Ⓓ thirty
5. The wood duck makes his nest out of Ⓐ straw Ⓑ grass and sticks
Ⓒ mud and grass Ⓓ feathers and rotten wood
6. How did the writer feel when she saw the ducklings? Ⓐ surprised Ⓑ it was what she expected to see Ⓒ disappointed Ⓓ worried
7. The head of the male duck was marked with Ⓐ blue Ⓑ yellow
Ⓒ black Ⓓ brown
8. What word describes the appearance of the male duck? Ⓐ ugly
Ⓑ handsome Ⓒ pretty Ⓓ fat

Do you know that ants are the most intelligent of all insects? Large groups or colonies of them are founded by the females. These colonies live in networks of passageways that are several feet below the earth's surface and often cover an area of fifty to one hundred square yards. The nests, or anthills as they are more commonly called, are the only part above ground, and are sometimes as much as six feet in diameter.

In Europe some species build mounds or homes entirely above ground. The only species in America that builds above ground is found in Wisconsin. These ants build a mound about twenty inches in height.

Another European species builds nests of clay or mud in hollow trees, housing thousands of ants in a single nest.

Probably the most unusual of all nests is a type found only in Australia. In these nests the part above ground is shaped like the branches of a tree.

1. The colonies are founded by Ⓐ the males Ⓑ the females Ⓒ the young Ⓓ all the ants
2. The only North American species which builds entirely above ground is found in Ⓐ Europe Ⓑ Australia Ⓒ Wisconsin Ⓓ California
3. The passageways are Ⓐ interconnected Ⓑ made of net Ⓒ above the surface Ⓓ twenty inches high
4. A nest shaped like branches of a tree is Ⓐ common Ⓑ uncommon Ⓒ found in North America Ⓓ built by most species
5. A European species is mentioned that builds a nest of Ⓐ grass Ⓑ hay Ⓒ mud or clay Ⓓ sticks
6. Which part of the ants' home is underground? Ⓐ the anthill Ⓑ six feet of it Ⓒ the passageways Ⓓ the part in Europe
7. A large group of ants living together is called Ⓐ European Ⓑ a network Ⓒ a colony Ⓓ a mound
8. The deepest passageways reach below the earth's surface Ⓐ one to three inches Ⓑ one foot Ⓒ several feet Ⓓ twenty feet

Scientists have discovered a way to control the vast power of atomic fusion for peaceful purposes, but obtaining power from any sort of nuclear reaction has several serious hazards. While the problems of waste disposal or the possibilities of horrible accidents are being reduced, much safer sources of energy are being found. As we approach the year 2000, much of our energy may be obtained from harnessing the most common forces of nature, such as the sun, the tides, and the wind. Our advanced civilization may depend on natural forces that the earliest people knew about. In some ways, we are learning to live with nature, rather than trying to conquer, and possibly destroy, our natural world.

- No. right
G score**

1	2	3	4	5	6	7	8
3.5	4.1	4.7	5.6	6.3	7.2	8.0	9.2

When children are born in any of the hamlets and villages along the banks of the "Blue Danube," a violin and a silver spoon are held up before their eyes as soon as they are safe in their cradles. If they reach for the silver spoon, they are declared destined to become merchants. If they grasp the violin, people say they will become musicians. We do not know which Johann Strauss did, but the infant was destined to become one of the most famous musicians in the world and to be called the "Waltz King."

Johann Strauss was an orchestra leader. He vowed that his son, Johann, Jr., or "Schani," was to become not a fiddler but a businessman. However, "Schani" could scarcely escape the fate that awaited him, for music was in his blood. Then, too, did he not share his bedroom with the violin, the drum, the flute, and the harp? Was he not rocked to sleep to the strains of waltzes and polkas, lancers and quadrilles, while his father rehearsed his orchestra, practically beside the infant's crib?

It is not surprising that "Schani" began composing almost as soon as he could talk and before he knew one note from another. His mother took down his first waltz when he was six. It had its "premiere" on his fifteenth birthday, under the title *First Thoughts*, and proved to have considerable merit.

1. Choose the best title: (A) First Thoughts (B) Early Life of Johann Strauss, Jr. (C) Talks to Future Musicians (D) Blue Danube
2. The father was (A) an orchestra leader (B) a violinist (C) a waltz king (D) a merchant
3. It is said that when infants reach for a spoon, they are destined to be (A) fiddlers (B) merchants (C) band leaders (D) musicians
4. This story is primarily about (A) musicians (B) Johann Strauss, Sr. (C) infants (D) the son of Johann Strauss, Sr.
5. "Schani's" first waltz was composed when the boy was (A) fifteen (B) at school (C) in the cradle (D) six years old
6. Johann Strauss, Jr., first wrote (A) poetry (B) prose (C) a march (D) a waltz
7. Who probably encouraged Johann Strauss, Jr., most? (A) mother (B) orchestra (C) father (D) uncle
8. Johann, Jr.'s mother (A) had her "premiere" (B) composed a waltz of considerable merit (C) wrote the music as he composed it (D) taught him his first waltz when he was six

From my window I look westward over a lake toward a high mountain range. Clouds passing over this range are forced to drop their moisture as rain. The rain fills the lake. The water of the lake operates generators that develop electricity. The electricity helps to produce aluminum. Aluminum, because it is so light and strong, is used in constructing airplanes that fly higher than the clouds that brought the rain.

This way of using a lake to help make airplanes was made possible by Charles Martin Hall. When, as a boy, he first heard of aluminum, it was so difficult to separate it from other materials that it cost \$8.00 a pound. Later he worked for two years experimenting in his father's woodshed and at Oberlin College, until he found an easy way to produce aluminum. This reduced the price to about fifteen cents a pound. Now aluminum is one of the most important metals in industry, and it is finding ever-increasing uses in building construction.

1. This story tells mainly about the production of Ⓐ airplanes
Ⓑ buildings Ⓒ clouds Ⓓ aluminum
2. Rising clouds are forced to Ⓐ change their color Ⓑ disappear
Ⓒ drop their moisture Ⓓ change their direction
3. Charles Martin Hall was Ⓐ an inventor Ⓑ a generator operator
Ⓒ a weatherman Ⓓ an electrician
4. Aluminum was very expensive because it had to be separated from
Ⓐ water Ⓑ electricity Ⓒ wood Ⓓ other materials
5. About how much did aluminum cost a pound after Hall's discovery?
Ⓐ \$8 Ⓑ 80 cents Ⓒ \$1.50 Ⓓ 15 cents
6. Building construction uses aluminum because it is Ⓐ white and bright
Ⓑ light and strong Ⓒ experimental Ⓓ expensive
7. Aluminum is now Ⓐ inexpensive Ⓑ expensive Ⓒ scarce
Ⓓ heavy
8. Choose the best title: Ⓐ Making Airplanes Ⓑ An Important
Invention Ⓒ Living By A Lake Ⓓ The Boyhood of Charles
Martin Hall

He was one of the greatest baseball players of all time. Twice he was named the most valuable player of the year in the American League. The New York Yankees, with him as their captain, won three World Series.

His fame did not come the easy way. It took great effort to become a fine first baseman. Once a wild pitch knocked him unconscious, but he was in the line-up next day. One by one he broke all ten fingers, but he played on. His bones might be broken or he might be ill, but he would always be in there playing. Lou Gehrig, The Iron Horse, as they called him, played 2130 games without skipping one.

Then, one day, he stood for the last time on the diamond where he had won his greatest triumphs. It was Lou Gehrig Day. Gifts were presented from all the baseball world. Lou bowed his head to the thunderous applause, while his famous pal, Babe Ruth, stood with his arm about him.

1. How many times was Lou Gehrig named the year's star American League player? Ⓐ one Ⓑ two Ⓒ three Ⓓ four
2. Lou's home diamond was in Ⓐ New York Ⓑ Cincinnati Ⓒ St. Louis Ⓓ Chicago
3. His team won the World Series three times when he was Ⓐ catcher Ⓑ pitcher Ⓒ second baseman Ⓓ captain
4. Gehrig's record of consecutive games played was Ⓐ 213 Ⓑ 2000 Ⓒ 2030 Ⓓ 2130
5. This player was given the title of Ⓐ Babe Ruth Ⓑ Old Faithful Ⓒ Old Ironsides Ⓓ The Iron Horse
6. He got his nickname because he Ⓐ was a wild pitcher Ⓑ was strong and long-wearing like iron Ⓒ he had a horse Ⓓ it was Lou Gehrig Day
7. He was given Ⓐ a diamond Ⓑ thunder Ⓒ Babe Ruth's gift Ⓓ a special day to honor him
8. Who applauded? Ⓐ all the baseball world Ⓑ the team captain Ⓒ Babe Ruth Ⓓ all the fans in the stadium

Strike a lump of sandstone with a hammer and the stone will break into pieces. Strike one of these pieces and it will break into grains of sand. Strike a grain of this sand and it will crumble into dust. Each particle of dust is made of a very large number of atoms. An atom is so small that it would take 200,000,000 of them in a row to make one inch. You can strike a grain of dust and its atoms all day, but you cannot split an atom with a hammer. An atom is the toughest thing to crack in the whole world.

It is well that someone with a hammer cannot split the atoms in a stone, for the splitting of these atoms would release energy that would blow that person higher than any building in the world. That person and the hammer would turn into a white cloud as hot as the sun at its center.

1. Which order is correct, going from biggest to smallest? (A) dust, atom, grain, lump (B) dust, piece, atom, grain (C) lump, grain, dust, atom (D) piece, sand, atom, lump
2. How many atoms are needed to make one inch? (A) twenty million (B) two hundred million (C) two billion (D) two hundred thousand
3. Which are easiest to count? (A) pebbles (B) grains of sand (C) particles of dust (D) atoms
4. Cracking an atom is (A) extremely difficult (B) possible with a hammer (C) a little complicated (D) impossible
5. What happens when an atom is split? (A) clouds explode (B) millions of rocks crumble (C) the sun gets hot (D) energy is released
6. An atomic explosion produces (A) suns (B) heat (C) high buildings (D) 200,000,000 atoms
7. If people could crack atoms with hammers, it would be (A) useful for science (B) terribly dangerous (C) a good way to make energy (D) easy to reach the sun
8. The heat from an atomic explosion is (A) hotter than the sun's center (B) as hot as a white cloud (C) as hot as the sun's center (D) 200,000,000 times hotter than the sun

A prominent professor in one of our leading universities decided to try to split the very core of an atom. He built a powerful machine called a *cyclotron*. Into this machine he fed electrical particles. Inside the machine these particles were made to travel around and around in a circle, faster, faster, faster, faster, faster! When they were going faster than anything known except the speed of light, they were shot through an opening against a metal plate. There was a flare of weird blue light.

The professor had ripped apart the stubborn atom. The professor lived to tell how it was done because he split only a few atoms and because he had built a very thick wall between himself and the explosions. About this same time other scientists in other nations succeeded in breaking atoms apart. The Atomic Age had begun.

1. What kind of particles were fed into the machine? Ⓐ electrical
Ⓑ chemical Ⓒ biological Ⓓ scientific
2. What was it that traveled faster, faster, faster? Ⓐ a machine
Ⓑ particles Ⓒ light Ⓓ a shot
3. The light mentioned in this lesson was Ⓐ green Ⓑ violet Ⓒ blue
Ⓓ yellow
4. The light was Ⓐ weird Ⓑ wired Ⓒ weary Ⓓ wary
5. How many atoms were split in this experiment? Ⓐ a few Ⓑ many
Ⓒ dozens Ⓓ none
6. The protecting wall this professor built was Ⓐ long Ⓑ circular
Ⓒ tall Ⓓ thick
7. In order to protect himself and others while experimenting, a scientist must use great Ⓐ strength Ⓑ caution Ⓒ force Ⓓ speed
8. Choose the best title: Ⓐ A Prominent Professor Ⓑ A Leading University
Ⓒ The History of a Machine Ⓓ The Success of a Cyclotron

No. right
G score

1
3.4

2
4.0

3
4.6

4
5.5

5
6.3

6
7.2

7
8.0

8
9.2

The cyclotron split the very core of the atom, but the power required was greater than the power produced. Scientists needed to find a way to make one atom explode the next, and that one the next, and so on in the ever-widening circle of a chain reaction.

During this time Hitler was in power in Germany and Jews were being persecuted. A German court had decided that Madame Lise Meitner had Jewish blood in her veins and therefore must stop all her scientific research. So she left her work and her home in Germany and went to another country. Unknown to the Germans was the fact that she carried a great secret. She had an idea that uranium, obtained from Canada, was just what the scientists had been looking for. And her idea was proven correct. The controlled explosions of a thimbleful would run an automobile until its engine wore out. It has been estimated that ten pounds of it would blast a hole in the earth one mile deep and thirty miles across, and would kill every living thing for a hundred miles around. Fortunately Madame Meitner went to work for the United States and its allies, and Germany was not able to produce an atomic bomb.

1. The cyclotron (A) was not practical (B) produced a chain reaction
 (C) was a German invention (D) was too small
2. Lise Meitner had to leave Germany because (A) she was a scientist
 (B) she had a secret (C) she was Jewish (D) she was not German
3. What did Madame Meitner think would produce the chain reaction?
 (A) minerals (B) uranium (C) thimbles (D) calculations
4. How much uranium was needed to power an automobile? (A) a secret amount
 (B) all there was in Canada (C) a tiny amount
 (D) an ever-widening circle
5. Madame Meitner's ideas were (A) proved to be right (B) only partially correct
 (C) false (D) used to run an automobile
6. Where did the raw material needed come from? (A) Germany (B) the United States
 (C) Canada (D) leading scientists
7. Why was the project secret? (A) there was a war on (B) it was scientific
 (C) they had only a thimbleful of uranium (D) Madame Meitner wouldn't tell anyone about it
8. Who profited most from Madame Meitner's wonderful mind?
 (A) Hitler (B) Hitler's allies (C) the United States and its allies
 (D) automobile makers

When atoms are splitting, deadly rays are given off. One scientist was experimenting with a small amount of plutonium. Suddenly the material became radioactive. He saw the fatal glow and quickly scattered the material to stop the activity and thus save others in the room. He walked out of the laboratory and went to the hospital, knowing that he would be dead in a few days.

Scientists use extreme care when working with these substances. They keep a lead wall between themselves and the "hot stuff." They watch experiments through periscopes and in mirrors. They change their clothes when leaving the laboratory. Even the cleaning mops are tested before they may be taken away. One instrument used for making these tests is called a Geiger counter. It makes a clicking sound every time a ray strikes it. People can be hit by a few rays without great injury, but scientists hurry to safety when the Geiger counter clicks rapidly.

1. The scientist was especially considerate of his fellow workers' Ⓐ time
Ⓑ work Ⓒ lives Ⓓ materials
2. The scientist was warned by a Ⓐ blow Ⓑ flow Ⓒ show Ⓓ glow
3. To protect other workers what did the scientist do to the pile of material?
He Ⓐ exploded it Ⓑ scattered it Ⓒ hit it Ⓓ threw it into water
4. What do laboratory technicians keep between themselves and the "hot stuff"? Ⓐ mirrors Ⓑ periscopes Ⓒ lead walls Ⓓ thick suits
5. The "hot stuff" is Ⓐ exceedingly dangerous Ⓑ too hot to touch
Ⓒ too hot to eat Ⓓ very poisonous
6. What happens to cleaning mops before they are taken from the laboratory?
They are Ⓐ shaken Ⓑ washed Ⓒ wrapped up Ⓓ tested
7. When a Geiger counter clicks quickly it means Ⓐ safety Ⓑ death
Ⓒ danger Ⓓ a fatal glow
8. People who work with atoms must guard against Ⓐ a few rays
Ⓑ contamination Ⓒ Geiger counters Ⓓ periscopes

No. right
G score

1
4.7

2
5.3

3
6.0

4
6.7

5
7.3

6
8.0

7
8.9

8
9.8

Scientists who helped develop the atom bomb are searching for ways to make atomic energy a blessing to the world.

When atoms are splitting, hundreds of other atom-splitting substances called radioisotopes are produced. Doctors find some of these useful in studying what goes on in the body. After a small amount has been swallowed in a pill, doctors can tell by means of a delicate instrument just where the substance goes in the body. Also, doctors expect that some of the substances will cure diseases. Perhaps your life will be saved by one of the radioisotopes.

1. Whether or not atomic energy becomes a blessing depends upon its
 (A) size (B) use (C) power (D) strength
2. Which profession especially profits by the use of atom-splitting substances?
 (A) medicine (B) teaching (C) pharmacy (D) business
3. What is an atom-splitting substance? (A) a radio (B) a radioisotope
 (C) pills (D) diseases
4. A small amount of the substance is given to the patient to (A) produce
 (B) listen to (C) swallow (D) study
5. The instrument by which doctors can trace the path of the pill through the body is (A) small (B) dangerous (C) huge (D) delicate
6. Perhaps your life could be saved by (A) a blessing (B) radioisotopes
 (C) the atom bomb (D) splitting instruments
7. Choose the best title: (A) The Peaceful Use of Atomic Energy
 (B) How Pills Cure (C) Developing the Atomic Bomb (D) The Dangers of Atom-Splitting Substances
8. This story tells about (A) advances in medicine (B) blessing the world
 (C) the danger of taking too many pills (D) what goes on in the body

Cameras were invented more than one hundred years ago, but new photographic inventions create exciting possibilities to this very day. The single lens reflex camera, a favorite with professional photographers and good amateurs, allows lenses to be interchanged and motor drives to be added. What does this mean for the photographer?

With a super-telephoto lens, a sports photographer can take close-ups even while seated extremely far away. The photo will give the impression that the photographer was right out on the field with the players.

With a motor drive attached to the camera, a photographer can take shots in fast sequence. Because it is not necessary to pause between shots to advance the film, fast-moving players are caught in all phases and so peak action is not missed. The photographer will not have to guess when the peak action will occur. There will be so many closely timed exposures that one will be bound to have captured the most exciting moment.

1. A single lens reflex camera allows photographers to (A) develop film instantly (B) change lenses (C) play sports (D) invent new cameras
2. Cameras were first invented (A) ten years ago (B) more than 200 years ago (C) more than a year ago (D) more than 100 years ago
3. Fast sequence shots can be taken with a (A) motor drive (B) lens only (C) antique camera (D) film advance lever
4. A good lens for sports close-ups is the (A) standard (B) super wide-angle (C) fisheye (D) super-telephoto
5. Exposures in fast sequence are (A) closely timed (B) always close-ups (C) always taken from far away (D) taken by professional photographers only
6. What might happen if the photographer pauses to advance the film?
 (A) the lens might fall off (B) the players might have to slow down or stop (C) the photographer might miss some of the peak action (D) the players will appear too far away
7. What kind of photography is this selection about? (A) travel
 (B) sports (C) portrait (D) nature
8. Which of the following is true? (A) the newest cameras are exactly like the earliest ones (B) many of the newest cameras can do much more than the earliest ones (C) the earliest cameras were the best
 (D) amateurs are not allowed to interchange lenses

No. right
G score

1	2	3	4	5	6	7	8
4.2	4.8	5.6	6.5	7.3	8.2	9.3	10.3

New York City
August 7, 1807

Dear Joseph:

Our common friend, Robert Fulton, has made possible a connection between the Atlantic seaboard and the Western frontier. Yesterday his *Clermont*, a steam-propelled river boat, moved up the Hudson to Albany at the speed of five miles an hour. As she left New York City, the river bank was lined with excited spectators who had come to scorn the idea that a crazy-looking craft like this, propelled by paddle wheels that are made to revolve by a lot of queer-looking machinery, would work. But it did! These people, who have jeered at Robert's invention as "Fulton's Folly," realize now that we have a vessel that will carry passengers and freight cheaply and quickly. What does this mean to you and me? Instead of waiting a decade to see you, it is possible that in less time, I shall travel by wagon to Redstone Old Fort and from there on a steamboat to St. Louis.

Your friend,

Gilbert Imlay

1. The Hudson is a (A) boat (B) river (C) inventor (D) city
2. Gilbert Imlay expected to make a trip from New York to St. Louis mostly by (A) driving a cart (B) floating a barge (C) paddling a canoe
 (D) traveling on a steamboat
3. The inventor named his invention the (A) Hudson (B) Robert Fulton
 (C) Redstone (D) Clermont
4. The invention of the steamboat was important because it could (A) go to Albany
 (B) travel to St. Louis (C) move people and goods fast and inexpensively
 (D) make Fulton famous
5. When the *Clermont* left New York there were (A) only two people on the bank
 (B) many people along the bank (C) some spectators along the bank
 (D) only friends of the inventor witnessing his first trip
6. Robert Fulton was (A) Gilbert's friend and a stranger to Joseph (B) a friend to both Gilbert and Joseph
 (C) Joseph's friend and a stranger to Gilbert (D) a stranger to both Gilbert and Joseph
7. The excited spectators jeered at Robert Fulton's invention because they thought (A) the idea was foolish (B) the vessel was propelled by steam
 (C) Albany was so far from New York (D) the vessel would carry passengers
8. The paddle wheels were propelled by (A) manual labor (B) a gasoline engine
 (C) machinery (D) water power

No. right
G score

1	2	3	4	5	6	7	8
3.5	4.2	5.0	5.9	6.9	7.8	9.1	10.2

A lawyer friend of mine has devoted herself to the service of humanity. Her special area is called "public interest law."

Many other lawyers represent only clients who can pay high fees. All lawyers have had expensive and highly specialized training, and they work long, difficult hours for the money they earn. But what happens to people who need legal help and cannot afford to pay these lawyers' fees?

Public interest lawyers fill this need. Patricia, like other public interest lawyers, earns a salary much below what some lawyers can earn. Because she is willing to take less money, her clients have the help they need, even if they can pay nothing at all.

Some clients need legal help because stores have cheated them with faulty merchandise. Others are in unsafe apartments, or are threatened with eviction and have no place to go. Their cases are all called "civil" cases. Still others are accused of criminal acts, and seek those public interest lawyers who handle "criminal" cases. These are just a few of the many situations in which the men and women who are public interest lawyers serve to extend justice throughout our society.

1. How does the salary of a public interest lawyer compare with the salary of other lawyers? Ⓐ it is about the same Ⓑ it is higher Ⓒ it is lower Ⓓ the public interest lawyer is not paid
2. A person who needs and uses legal help is called a Ⓐ lawyer
Ⓑ client Ⓒ tenant Ⓓ case worker
3. People who need legal help should receive it Ⓐ whether or not they can pay Ⓑ only if they can pay Ⓒ only in civil cases Ⓓ only in criminal cases
4. Public interest lawyers must be Ⓐ well paid Ⓑ highly qualified
Ⓒ men only Ⓓ women only
5. Public interest lawyers serve Ⓐ only stores and landlords
Ⓑ criminals only Ⓒ people who can pay high fees Ⓓ people who can pay little or nothing
6. If only the rich could be helped by lawyers, the justice system would be Ⓐ undemocratic Ⓑ fair and reasonable Ⓒ modern Ⓓ in need of no changes
7. Public interest law includes Ⓐ civil cases only Ⓑ criminal cases only Ⓒ criminal and civil cases Ⓓ wealthy clients' cases
8. Which of the following is not a matter for a civil case? Ⓐ a tenant is faced with eviction Ⓑ a landlord refuses to fix a dangerous staircase Ⓒ a burglar is arrested Ⓓ a store sells a faulty radio

No. right
G score

1
5.6

2
6.2

3
6.8

4
7.4

5
8.0

6
8.8

7
9.6

8
10.3

There is a "mystery spot" near Santa Cruz, California. All trees in this mystery spot lean in one direction, but redwood trees a short distance from it grow straight and tall. People have great difficulty walking in the mystery area. Their feet feel like lead. It is almost necessary to drag themselves along the trail by holding to a handrail. Many are unable to step over a low doorsill and into a cabin. They enter by sitting on the doorsill and swinging their feet over it. When standing in the cabin, they lean in the same direction as the trees. They feel as though they are standing as usual, but actually they are leaning at such an angle that they look ludicrous to people watching them.

Two concrete slabs lie about six inches apart. One is inside the mystery spot and the other outside it. When a person five feet tall stands on the mystery-spot slab, he looks taller than a person six feet tall standing on the other slab, although the two slabs are really on the same level.

It is the guess of Einstein and many other scientists that gravity is pulling harder at that spot.

1. People have difficulty walking in the mystery spot because Ⓐ their feet feel like lead Ⓑ redwood trees grow in great numbers Ⓒ all trees lean in one direction Ⓓ no handrail is available
2. Redwood trees growing a short distance from the mystery spot Ⓐ are stunted Ⓑ all lean left Ⓒ stand straight Ⓓ lean in different directions
3. When people stand in the cabin they Ⓐ stand as usual Ⓑ lean in the same direction as the trees Ⓒ have no headaches Ⓓ think everyone else looks ludicrous
4. Many people enter the cabin by Ⓐ holding to a handrail Ⓑ stepping over the low doorsill Ⓒ sitting on the doorsill and swinging their feet over it Ⓓ leaning against the door until it opens
5. Two concrete slabs are placed Ⓐ within the mystery spot Ⓑ just outside the spot Ⓒ nine inches apart Ⓓ one outside and one inside the mystery spot
6. Scientists have guessed that the strange behavior in the mystery spot is due to increase of the Ⓐ glare of light rays Ⓑ pull of gravity Ⓒ light substances in the earth's crust Ⓓ pull of a lightweight meteorite
7. Einstein is the name of Ⓐ a place in California Ⓑ a scientist Ⓒ a mystery Ⓓ gravity
8. A visit to this spot is Ⓐ a ludicrous idea Ⓑ dangerous Ⓒ a disorienting experience Ⓓ impossible without handrails

No. right
G score

1	2	3	4	5	6	7	8
3.5	4.3	5.1	6.0	7.0	8.0	9.3	10.4

Venice is the home of the romantic gondolier. Small boats called gondolas, or *gondole* in Italian, travel along canals carrying the Venetians and their visitors all over this colorful Italian city. Gondoliers enjoy entertaining tourists by singing traditional Italian songs.

Gondolas have been in use for centuries. Who would guess that the gondoliers have some very modern problems? Just as bus drivers, train conductors, and taxi drivers have gone on strike, so have gondoliers. Before one strike, they pulled their gondolas onto the land in front of the city hall, stood by them, and whistled in protest.

Gondoliers worry about the effects of the *vaporetti* and *motoscafi*. These larger, motorized boats are the modern buses and taxis of Venice. Their motors make the canal waters choppy and dangerous for the gondoliers. Often a canal will become so crowded with motor boats that the gondolier cannot use it. The gondoliers have warned the government, "One day all our gondolas will be inside a museum."

1. Venice is a city of (A) automobiles (B) expressways (C) country paths (D) canals
2. Which came first? (A) motorized taxi boats (B) motorized bus boats (C) gondolas (D) *vaporetti*
3. Gondoliers have (A) modern problems (B) a carefree life (C) large motorized boats (D) safe waters
4. Gondoliers enjoy entertaining (A) the government (B) taxi drivers (C) tourists (D) other gondoliers
5. Motorized boats make the canal waters (A) choppy and dangerous (B) calm and pleasant (C) colorful and romantic (D) resound with Italian songs
6. Gondoliers worry about the effects of (A) museums (B) highway buses (C) *vaporetti* and *motoscafi* (D) the government
7. Often some canals become (A) noisy with whistling (B) empty and calm (C) too shallow (D) too crowded
8. Gondoliers have protested to (A) government officials (B) tourists (C) train conductors (D) bus drivers

No. right
G score

1
3.9

2
4.6

3
5.5

4
6.5

5
7.4

6
8.4

7
9.6

8
10.6

The words and melodies of *Way Down Upon the Swanee River* or *My Old Kentucky Home* sound as if they had first been sung in the slave quarters of an old southern plantation. Young and old alike are familiar with these songs and are touched by the longings expressed in the words and tunes. The lively rhythms and boisterous lyrics of *O' Suzanna* and *Camp Town Races* are equally familiar and sound like songs passed down from pioneer days. Yet these four songs were all written by one white American composer—Stephen Foster.

Author of almost two hundred songs, most of which became immediately popular, Foster gained little from the immense sale of his works. He usually sold his compositions to a publisher for a small amount of ready cash, which soon slipped through his fingers. Poverty stricken, he died in New York City in a Bowery lodging, at the age of thirty-eight. His last song, *Beautiful Dreamer*, was composed while the impoverished musician was living in miserable conditions, but its lovely lyrics and melody continue to delight singers and listeners.

1. *My Old Kentucky Home* is (A) the state song of Kentucky (B) a Negro spiritual (C) a folksong (D) a song by Stephen Foster
2. Which statement is true? (A) Foster composed music only (B) Foster wrote the lyrics and scores of original songs (C) Foster wrote about 38 songs (D) today, only *Beautiful Dreamer* remains popular
3. Stephen Foster was a (A) slave (B) publisher (C) composer (D) pioneer
4. Foster's songs were (A) instant hits (B) disliked (C) almost unknown (D) unpublished
5. Foster sold his songs (A) for a great deal of money (B) to Camp Town (C) for little money (D) for a quarter
6. Foster died (A) impoverished (B) in the Swanee River (C) at the races (D) a rich man
7. *Beautiful Dreamer* was Foster's (A) life story (B) last song (C) song about New York (D) best loved song
8. Foster's songs continue to be popular because they are (A) folksongs (B) spirituals (C) liked by all ages (D) all lively

The ship's surgeon approached the captain of the huge ocean liner.

"Captain," he said, "that little girl I've been attending is in a serious condition. I'm afraid I'll have to operate but I'd like to have another opinion first. There is no other doctor aboard."

"The *Baltic* can't be very far west of us," replied the skipper.

This message soon flashed through the air: "Roberts, master *Baltic*—Serious operation seems necessary to save life of a child. My doctor urgently requests another opinion. My position at 8:40 A.M., G.M.T., lat. 41.56 north, long. 46.25. Gates." A reply soon came: "Send symptoms. Am 70 miles west of you."

Gates returned this message: "Assistance needed at once. Suggest that you put about and meet me." Captain Roberts' quick response was: "Turning around. Setting course for you full speed."

Within two hours the ships had come near enough together to drop a lifeboat and send the doctor, through a choppy sea, to the suffering child. While the two ships steamed side by side toward the home port, their respective surgeons were employing all their skill to save the life of the tiniest passenger.

Her assured recovery was a cause for rejoicing on board both ships.

1. The surgeon needing help was on (A) an ocean liner (B) the *Baltic*
 (C) a sailing boat (D) a lake boat
2. The *Baltic* in this selection was a (A) sea captain (B) sea (C) ship
 (D) surgeon
3. The first message was sent (A) at noon (B) in the early evening (C) in
 the morning (D) at midnight
4. The events in this selection happened (A) when the captain finished his
 other work (B) in rapid succession (C) at long intervals (D) after
 many interruptions
5. The surgeon reached the other ship by means of (A) a gangplank
 (B) a rope ladder (C) an airplane (D) a lifeboat
6. The ships, after meeting each other, steamed (A) parallel (B) in
 opposite directions (C) one in front of the other (D) one north and
 one west
7. The captains of the ships knew how to find each other by (A) their
 distance apart (B) the direction in which they were sailing (C) the
 distance from the home port (D) longitude and latitude
8. The captains of the two ships were (A) indifferent (B) unwise
 (C) cooperative (D) ill tempered

No. right
G score

1
5.3

2
6.0

3
6.7

4
7.4

5
8.1

6
9.0

7
9.9

8
10.6

Baltimore, Maryland
May 24, 1844

Dear Samuel,

The nomination of James K. Polk for President of the United States was only one feature of the Democratic Convention. Have you heard that the reports of this convention in Baltimore were received in Washington fifteen minutes after Polk was nominated? The news was sent by electric telegraph! Professor Morse prophesied that he would transmit electric signals over slender copper wires strung between poles a distance of forty miles. He said that these signals, long and short sounds, could spell out words, and that from these words messages could be made. The farmers, villagers, and urbanites laughed at the idea and were amazed that Congress should appropriate \$30,000 to defray the expense of such a ridiculous experiment. However, Morse's triumph has convinced not only all these people but doubting businessmen. I predict that this invention will play a most important part in the making of our nation, and I have a strong desire to be one of the pioneers in telegraphy. Alfred Vail, Morse's assistant, has asked me to become a stockholder in a telegraph company.

Your devoted friend,

Cyrus Roebbling

1. In 1844 electric messages could be sent Ⓐ from Jamestown to Boston
Ⓑ to New York from Baltimore Ⓒ to Washington from Baltimore
Ⓓ from Washington to Jamestown
2. Signals received over the wires were Ⓐ short and long sounds
Ⓑ equal wave lengths Ⓒ flashes of light Ⓓ spoken words
3. Farmers and urbanites laughed because the experiment seemed
Ⓐ simple Ⓑ difficult Ⓒ prophetic Ⓓ ridiculous
4. The money for Morse's experiment came from Ⓐ the inventor
Ⓑ Congress Ⓒ a philanthropist Ⓓ charity
5. The money was given by Congress to Ⓐ help pay the cost of the
experimenting Ⓑ establish a telegraph company Ⓒ build a
government telegraph station Ⓓ encourage other inventions
6. Who was Morse's assistant? Ⓐ James K. Polk Ⓑ Alfred Vail
Ⓒ Cyrus Roebbling Ⓓ Samuel Goddard
7. Cyrus Roebbling desired to participate in the development of telegraphy
because he Ⓐ liked Morse and Vail Ⓑ knew the invention would
be a great factor in social and industrial life Ⓒ was an inventor
Ⓓ liked mechanics
8. This letter could not be written today because Ⓐ we do not have
Democratic Conventions Ⓑ radio has replaced the telegraph
Ⓒ we have airmail service Ⓓ these people are not alive today

No. right
G score

1
4.4

2
5.2

3
6.0

4
6.9

5
7.6

6
8.6

7
9.8

8
10.6

The Pankhurst family of Manchester, England, were all deeply concerned about social injustices, especially those that affected women. In 1903 Mrs. Emmeline Pankhurst and her two daughters, Christabel and Sylvia, organized the Women's Social and Political Union in which women joined together to fight for the right to vote. To gain support for women's suffrage, the Pankhursts gave speeches throughout the country, organized parades and rallies, talked to members of Parliament, and wrote hundreds of pamphlets. When the movement became militant, more than one thousand were arrested, jailed, and forced to do hard labor.

Sylvia Pankhurst wanted to be a painter. She was studying at the Royal School of Art when she joined her mother and sister in the fight for women's rights. After women in England won the right to vote in 1918, Sylvia continued to work for better social conditions. She moved to the slums of London's East End and established a shelter for abandoned, abused, and homeless women. She campaigned for equal pay for equal work, nurseries for working mothers, and better health care for the poor. Several times she was arrested and imprisoned for her activities, but that did not deter her.

1. **Suffrage means** (A) misery (B) lack of air (C) right to vote
 (D) social injustice
2. **Equal pay for equal work means** (A) the poor receive the same pay as the rich (B) people doing the same work are paid the same (C) no one works harder than anyone else (D) no one earns more money than anyone else
3. **Sylvia Pankhurst wanted to be** (A) an artist (B) a member of Parliament (C) a working mother (D) arrested
4. **Women had the right to vote** (A) since 1903 (B) since the American Revolution (C) at the same time men won the right (D) after a long hard struggle
5. **Women were sent to jail because** (A) they joined the military (B) they became militant (C) they refused to vote (D) a shelter was needed
6. **One method the activists used was** (A) marches (B) strikes
 (C) electing representatives to Parliament (D) making speeches on TV
7. **In 1918, Sylvia** (A) studied at The Royal School of Art (B) gave up the fight for human rights (C) helped the poor fight for better conditions
 (D) joined her mother and sister in the fight for women's right to vote
8. **The Pankhurst family** (A) fought for what they believed in
 (B) struggled to improve prison conditions (C) died in jail
 (D) campaigned for election

No. right
G score

1	2	3	4	5	6	7	8
5.3	6.0	6.7	7.4	8.1	9.1	9.9	10.7

Martha Graham, a dancer, is considered one of the most important artists of the twentieth century. She pioneered a new art form called modern dance. Martha Graham was one of the first people to use dance movements to express inner feelings of anger and fear, as well as love and joy. While this idea seems common today, it was revolutionary in many ways.

For many years, modern dance was sharply criticized. Many people believed that the traditions of classical ballet dancing should not be violated. Martha Graham's work was a sharp break with these traditions.

Many people, accustomed to the graceful movements of classical ballet, found it difficult to accept the realism of modern dance. These people had never seen barefoot dancers twist their bodies into "ungraceful" shapes. These shapes expressed conflict and confusion as well as traditional feelings. However, as the years went by, modern dance became a widely accepted part of our culture. Now Martha Graham is respected not only for her important artistic works, but also for her remarkable courage.

1. Martha Graham strongly believed in Ⓐ keeping old traditions
Ⓑ introducing new ideas Ⓒ expressing only love and joy
Ⓓ pleasing everybody
2. When modern dance was introduced, it was Ⓐ loved by everybody
Ⓑ strongly criticized Ⓒ very traditional Ⓓ unnoticed
3. The story says that modern dance was different because it Ⓐ expressed feelings like conflict and confusion Ⓑ did not express dark feelings
Ⓒ was loved by everyone Ⓓ expressed happy feelings
4. Martha Graham lived in what century? Ⓐ 19th Ⓑ 17th Ⓒ 18th
Ⓓ 20th
5. Martha Graham could best be described as Ⓐ traditional Ⓑ shy
Ⓒ pioneering Ⓓ fearful
6. Critics of modern dance probably believed that traditional ways Ⓐ are the best ways to do things Ⓑ are wrong Ⓒ should be changed
Ⓓ are old-fashioned
7. Martha Graham's modern dance was different from classical ballet
Ⓐ in the movements of the dancers' bodies Ⓑ because it took more skill Ⓒ in its expression of love and joy Ⓓ because it wasn't artistic
8. Choose the best title: Ⓐ Keeping Fit Ⓑ Preserving Traditions
Ⓒ Expressing Love and Joy Ⓓ A Courageous Pioneer in the Arts

Astronomers believe that the universe was once a vast tight mass of hydrogen. They claim that all substances in the universe were created during the first half hour after the heated mass of hydrogen exploded, forming our present universe. Scientists have studied the ashes where an atom bomb or a hydrogen bomb has been exploded. They have seen what happens when substances are heated to a high temperature in laboratories. From these studies they now know how great heat at the core of stars or at the time of the great explosion of the universe could turn hydrogen into helium, iron, uranium, and all other substances found in the universe. The explosion theory is supported by the fact that substances that the process indicates should be common, *are* very common. And those it indicates should be scarce, *are* scarce.

It is known that after millions and millions of years, uranium changes into lead. By studying how much uranium has changed into lead, it is possible to calculate how long ago the uranium was created. The time thus calculated is about 5,500,000,000 years.

Astronomers conclude from the speed of movement of the stars that they were exploded from some central point about 5,500,000,000 years ago. Since uranium was created about that time, the explosion theory of how the universe was made has gained additional support.

1. This is a lesson in (A) history (B) geography (C) science (D) health
2. This selection is mainly about (A) the atomic and hydrogen bombs
 (B) a theory explaining the age of the Universe (C) explosions
 (D) the creation of uranium
3. It appears that the explosion theory of how the universe was made may be (A) correct (B) incorrect (C) improbable (D) impossible
4. Some astronomers believe that all substances in the universe were created during which period of time after the explosion? (A) first day (B) first 15 hours (C) first 5 hours (D) first half hour
5. Some astronomers believe that the universe was once a vast tight mass of (A) hydrogen (B) uranium (C) helium (D) iron
6. One theory is that a heated mass once exploded forming (A) lead
 (B) stars (C) the present universe (D) planets
7. Uranium was first created about how many years ago? (A) 2,000,000
 (B) 6,000,000 (C) 100,000,000 (D) 5,500,000,000
8. Uranium changes into (A) iron (B) lead (C) copper (D) steel

No. right
G score

1
6.5

2
7.0

3
7.5

4
8.1

5
8.8

6
9.5

7
10.1

8
10.8

Outlined against the evening sky, Vesuvius with its curling gray smoke was mysterious, alluring. We could scarcely wait to make our pilgrimage to this volcano that has buried cities under its ashes.

It had been reported the day before we landed at Naples that the volcano had had a period of activity and was still in eruption. We were feverish with excitement when we stepped into the funicular railway car that crept up the mountain toward the smoking crater. The wind was blowing the smoke inland and, as we approached the summit, the crater was clearly visible.

We hesitatingly stepped out on brownish lava. We had expected it to burn our heavy-soled shoes but, to our amazement, found it cool to the bare hand. Our disillusionment continued from this moment. We walked along the crater's rim, even descending into it. We found it, far from being a basin of molten metal, only a sunken field containing cones of various sizes. Only one cone was belching forth all the smoke we had seen from the valley below. Occasionally, like soup in an over-full pot, its contents overflowed slightly, running down its sides and spreading out for a short distance toward the other cones.

1. Vesuvius was, at the time of this trip, (A) dormant (B) in partial eruption (C) extinct (D) in full activity
2. A crater is (A) a mountain (B) an inn at the summit of a mountain (C) an outlet of a volcano (D) molten lava
3. What word suggests that the author was eager to visit the volcano? (A) hesitatingly (B) mysterious (C) eruption (D) excitement
4. When they got near the top, (A) the crater was invisible (B) there was smoke all around (C) they could see the crater (D) the smoke crept up the mountain
5. They stepped out hesitatingly because (A) it was cool (B) they expected the lava to be very hot (C) they were afraid to burn their hands (D) the smoke was blowing inland
6. They walked along (A) the rim of the cone (B) the edge of the crater (C) the over-full pot (D) the base of Vesuvius
7. The smoke was coming from (A) the valley (B) many cones (C) metal (D) one cone
8. The inside of the crater looked like (A) molten metal (B) fire (C) a low field (D) belching froth

The question of the conservation of wild animal life in our country is one that affects the lumber pile, the market basket, and the dinner pail. Originally our fields and forests held game in such marvelous variety and numbers that the supply seemed inexhaustible. With the coming of white men and firearms all this changed. The buffalo was wantonly killed, until he became almost extinct. The antelope and elk, which for years furnished the meat supply of the Indians and pioneers, were slaughtered, in some instances solely for their branching antlers. Many species of birds once common to the United States have been exterminated, and others have barely escaped that fate. All told, the amount of game today is only a small percentage of what it was fifty years ago. This wholesale destruction of wildlife has upset the balance of nature. Without birds, insect pests have increased enormously, and many orchards and forests have been damaged to an alarming extent.

1. In the early days, our fields and forests Ⓐ were badly damaged
 Ⓑ were good places to play games Ⓒ were full of wild animals
 Ⓓ were piled into lumber
2. The buffalo Ⓐ became extinct Ⓑ were wiped out by the Indians
 Ⓒ were almost all killed without reason Ⓓ were hunted for their antlers
3. The supply of wildlife is Ⓐ exhaustible Ⓑ inexhaustible
 Ⓒ exhausted Ⓓ increasing enormously
4. In the past fifty years, the animals in the forests have Ⓐ grown by a small percentage Ⓑ been reduced to a fraction of what they were
 Ⓒ all been exterminated Ⓓ wantonly killed the pioneers
5. Many kinds of birds have been Ⓐ alarmed Ⓑ sold wholesale
 Ⓒ completely destroyed Ⓓ found in orchards
6. The number of insects has Ⓐ grown much bigger Ⓑ escaped their fate
 Ⓒ kept in balance Ⓓ lived in antler branches
7. Orchards and forests have been damaged by Ⓐ insects Ⓑ birds
 Ⓒ buffalo Ⓓ elk
8. Conservation is Ⓐ alarming Ⓑ important Ⓒ of no consequence
 Ⓓ slaughtering the animals

No. right
C score

1
5.3

2
6.0

3
6.8

4
7.5

5
8.3

6
9.2

7
10.1

8
11.1

Long before the days of printing, minstrels wandered from castle to castle singing before kings and their retainers. Their songs were usually about the character and brave deeds of a real hero. Often these minstrels, these "gleemen," used their imaginations and added mythical deeds. No one at that time attempted to write down these tales, for few knew how to write. The stories were originally handed down by word of mouth, very much in the same way as were the legends of the American Indians. About the year 700, the stories relating to the brave deeds of a hero, Beowulf, were collected by some Anglo-Saxon poet of the time. This poem has since been translated into modern English, and today we can enjoy reading the first epic poem in English literature. Beowulf fought two dreadful fights to save a king and one to save his own people.

1. The story states that minstrels' songs were usually about the (A) beauties of the country (B) benevolence of a king (C) brave deeds of some hero (D) adventures of a prince
2. The tales the minstrels sang about were (A) completely true (B) imaginary (C) a mixture of truth and myth (D) Indian legends
3. Stories were passed on (A) in printed books (B) by one person telling another (C) by retainers (D) by heroes
4. Changes were sometimes made because (A) the king forbade the minstrels to sing (B) the "gleemen" used their imaginations (C) people wrote the songs incorrectly (D) poets sang to please the retainers
5. Minstrels were (A) translators of English literature (B) servants to the king (C) writers of Anglo-Saxon (D) traveling poets and singers
6. Beowulf was the name of (A) an Indian (B) a king (C) a poet (D) a hero
7. The poem *Beowulf* was originally written in (A) German (B) Anglo-Saxon (C) English (D) French
8. Beowulf (A) wandered from castle to castle (B) translated Anglo-Saxon (C) lived before 700 (D) was a "gleeman"

The Araucano Indians never built great pyramids and never ruled a great empire. They did something equally amazing. They held off two of the world's greatest empires.

The Araucanos were a simple people who lived in the mountains and forests of what is today Chile.

Around the middle of the 15th century, the Inca leader, Tupac Yupanqui, set out to add the Araucanos to his empire. At first, the Incas won. The farther south they went, however, the harder the Araucanos fought. Finally, the Incas stopped at the River Maule. They had had enough.

About 100 years later, the Spanish Conquistadores conquered the Incas and their empire. Within a few years, the Spanish decided to expand south of the Maule. They moved in and built towns. The Araucanos attacked the Spanish troops and burned the towns. The war went on for years. Every valley changed hands many times. Finally, like the Incas, the Spanish gave up and left the land south of the Maule to the Araucanos. It wasn't until 1881 that the Araucanos were finally conquered by the government of Chile.

1. **The Araucano Indians** (A) had a great empire (B) conquered two great empires (C) held off two great empires (D) built huge stone pyramids
2. **The Araucanos lived** (A) in the desert (B) in Chile (C) in Peru
 (D) in the jungle
3. **The Incas** (A) crossed the River Maule (B) attacked the Araucanos in the 17th century (C) were never defeated (D) defeated the Araucanos at first
4. **When the Spanish arrived, the Inca Empire** (A) conquered them
 (B) ended at the River Maule (C) moved south (D) attacked the Araucanos
5. **The first thing the Spanish did when they moved south of the Maule was**
 (A) build towns (B) attack the Araucano chief (C) burn Araucano towns (D) build pyramids
6. **The war between the Spanish and the Araucanos** (A) ended quickly
 (B) never ended (C) lasted for years (D) ended after six months
7. **The Spanish finally** (A) signed a peace treaty (B) gave up and left
 (C) bought land from the Araucanos (D) were all killed
8. **Today, the Araucanos are probably** (A) a great empire (B) still independent
 (C) citizens of Chile (D) living in Spain

The Araucanos were able to hold off both the Incas and the Spanish Conquistadores because of their determination.

The Incas were brilliant organizers and engineering geniuses. The Araucanos were never well organized and knew nothing of engineering. The Spanish had all the latest weapons: guns, cannons, and horses. The Araucanos were on foot and armed with spears, clubs, and arrows. Yet, in the end, the Araucanos won because they were willing to make any sacrifice and were unwilling to surrender. They just wore their enemies out.

Knowing this, it is easy to understand why the Araucanos chose their war chief the way they did. Normally, the different tribes didn't have much contact with each other. In times of war, however, all the chiefs gathered to choose one war chief for all the tribes. One after another, each chief would pick up a huge tree trunk and hold it. The chief who could stand holding the trunk the longest would become war chief.

1. **The Incas were** (A) good engineers (B) badly organized
 (C) cowards (D) willing to make any sacrifice
2. **The Araucanos** (A) had horses (B) were very good organizers
 (C) were not well organized (D) were afraid of horses
3. **The Spanish** (A) wore their enemies out (B) had horses (C) were
 totally unwilling to surrender (D) were cowards
4. **The Araucanos' greatest weapon was** (A) their size (B) their ability to
 live off the land (C) their brains (D) their determination
5. **During times of peace, the Araucano tribes** (A) lived in large towns
 (B) didn't have much to do with each other (C) met twice a year
 (D) trained horses
6. **The war chief was chosen for** (A) his age (B) his determination
 (C) his brains (D) his experience
7. **For the test to choose a war chief, the Araucanos used** (A) a tree trunk
 (B) a holy rock (C) a horse (D) spears and arrows
8. **The war chief was the chief who could** (A) run the farthest (B) hit the
 target the most times (C) stand the longest (D) ride the fastest

Since the mid-1920s, many filmmakers have expanded the scope of the documentary film. Robert Flaherty, called "the father of documentary film," produced *Nanook of the North* and more than a score of other photographic studies of peoples in many parts of the world. Other filmmakers have produced documentaries on almost every conceivable subject. For example, documentaries have explored juvenile delinquency, agricultural methods of Tibet, and even volcano eruptions, for movies and television. Today they use sophisticated equipment such as underwater and motor-driven cameras, strobe lights, fast color film, telephoto, wide-angle and zoom lenses, film cartridges, and portable sound recording devices. They travel by jets and jeeps to the far corners of the earth, recording the lives of people and wild animals. Jacques Cousteau, the French oceanographer, has thrilled millions of television viewers with his documentaries about the creatures and mysteries of the seas.

1. Robert Flaherty was "the father of documentary film" because Ⓐ he had many children Ⓑ he was the first to make a documentary Ⓒ his children were filmmakers Ⓓ he was the first filmmaker
2. How many films did Flaherty make? Ⓐ more than 10 Ⓑ 25
Ⓒ more than 20 Ⓓ more than 30
3. Flaherty did not use a Ⓐ camera Ⓑ strobe light Ⓒ film
Ⓓ lens
4. As in Flaherty's day, photographers use Ⓐ color films Ⓑ film cartridges Ⓒ motorized cameras Ⓓ black and white film
5. Jacques Cousteau is Ⓐ a mystery writer Ⓑ an actor
Ⓒ an aquatic explorer Ⓓ the father of documentary films
6. Documentary filmmaking has improved because of Ⓐ increased costs Ⓑ technological advances Ⓒ oceanographers Ⓓ television viewers
7. Documentaries are so named because they are Ⓐ written records
Ⓑ films of actual events Ⓒ produced by filmmakers Ⓓ made with many lenses
8. The main idea of this story is Ⓐ Robert Flaherty Ⓑ travels around the world Ⓒ documentaries have developed and been expanded
Ⓓ Jacques Cousteau

Most trees live at least one hundred years, many very much longer. On the western slopes of the Sierra Nevada Mountains in California there are trees of great age. The oldest are estimated to be between two and three thousand years of age. Modern scientists have named them *Sequoia gigantea*—*Sequoia* after a famous Cherokee Indian, *gigantea* because of their enormous size.

These trees belong to the pine family and are distinguished by the reddish color of their heartwood. Their foliage is more delicate and feathery than that of the other conifers. The cones are very small, about two and one-half inches long. For a hundred feet or more, the massive trunk rises without a branch. The tallest trees attain a height of about 300 feet, and their trunks vary from thirty to forty feet in diameter.

Most of these giant trees would have been felled for lumber but for the intervention of the great naturalist, John Muir. Largely through his efforts, the groves have been made national parks, and the sequoias have been saved from extinction.

1. **These trees grow** Ⓐ west of California Ⓑ in valleys Ⓒ on the sides of mountains Ⓓ on the summits of mountains
2. **The oldest of these trees are between** Ⓐ 20 and 30 years Ⓑ 200 and 300 years Ⓒ 2,000 and 3,000 years Ⓓ 20,000 and 30,000 years
3. **They were named for** Ⓐ a naturalist Ⓑ an Indian Ⓒ an explorer Ⓓ a lumberman
4. **The giant sequoias are conserved** Ⓐ so they will become extinct Ⓑ to be used as lumber Ⓒ for their natural grandeur Ⓓ because of the scarcity of pine trees
5. **In thickness the tallest sequoias are approximately** Ⓐ 2½ inches Ⓑ 35 feet Ⓒ 100 feet Ⓓ 300 feet
6. **John Muir was** Ⓐ a scientist Ⓑ a Cherokee Ⓒ an ecologist Ⓓ a park ranger
7. **If not for Muir, the trees would** Ⓐ be very small Ⓑ no longer exist Ⓒ be in a national park Ⓓ be enormous
8. **The sequence of discussion is** Ⓐ description of tree, conservation, name, age Ⓑ name, age, conservation, description of tree Ⓒ age, name, description of tree, conservation Ⓓ conservation, description of tree, age, name

Dear Bill,

The lure of the game and the anticipated profits impelled me to continue my journey to the gold fields. Brigham Young gathered us together at Independence, Missouri, and a mighty caravan of prairie schooners, farm wagons, pushcarts, wheelbarrows, and horsemen started on a daring trip. During the day our trail filled the road for miles, and at night our campfires glittered about the places that furnished grass and water. We survived the horrors of swollen rivers, mountain storms, thirst, starvation, and sickness.

The prospector's job of panning for gold has been changed to that of a merchant, and I shall settle at San Jose, barter with the Indians, and sell to the settlers shirts at \$40 each, shovels at \$10, and candles at \$3. Won't you join me in my enterprise?

Your friend,

Robert Toombs

1. The writer was headed west to Ⓐ go to Missouri Ⓑ get rich
 Ⓒ travel and see the country Ⓓ barter with the Indians
2. Robert Toombs also was interested in Ⓐ hunting Ⓑ farm wagons
 Ⓒ rivers Ⓓ mountains
3. What is a caravan? Ⓐ a gathering place in Independence Ⓑ a
 road Ⓒ a mighty schooner Ⓓ a group traveling one behind the
 other
4. The writer says the trip was daring because Ⓐ it was dangerous Ⓑ it
 was expensive Ⓒ Brigham Young dared him Ⓓ he was lured by
 game
5. They camped near Ⓐ mountains Ⓑ wheelbarrows Ⓒ water
 Ⓓ gold fields
6. One of the problems was Ⓐ campfires Ⓑ lack of food Ⓒ they had
 no candles Ⓓ money
7. Toombs decided not to be a Ⓐ merchant Ⓑ trader Ⓒ horseman
 Ⓓ gold miner
8. He wanted Bill to Ⓐ work in the gold fields Ⓑ be independent
 Ⓒ come and work with him Ⓓ buy a shirt

The mistletoe, many fear, is doomed to disappear. The little green sprig with the dull, leathery leaves and the round, whitish berries may lose its place at our Christmas festivities because it is a parasite. It grows and feeds upon trees, and foresters have pronounced it a nuisance.

Among the ancient Druids, however, the mistletoe was the object of special veneration when it grew upon an oak. The oak was a sacred tree, and whatever was found growing upon it was regarded as sent from heaven. Thus the mistletoe was called "all-heal," and was looked upon as an antidote for poisons.

The Druids gathered the mistletoe with great ceremony. Five days after the new moon of the winter solstice a grand procession was formed. The bards came first. Then came a herald, who bore the golden knife for cutting. The priests came next, with the prince and all the people following. The prince climbed the tree and cut the mistletoe, which was gathered up and distributed to the people. In their turn, the people hung the sprays over the entrances to their houses as a propitiation and an offer of shelter to sylvan deities during the season of frost and cold.

Customs have changed much since then, but the mistletoe still holds a large place in Christmas and New Year's decorations.

1. Mistletoe is threatened with extinction because it (A) destroys other vegetable life (B) has no marketable value (C) does not lend itself to decorative purposes (D) has an unpleasant odor
2. The origin of the use of mistletoe is (A) recent (B) unknown (C) American (D) pagan
3. The selection states that in ancient times the oak was regarded as (A) king of the forest (B) sacred (C) something to be despised (D) a shelter from the storm
4. The plant was cut by the (A) people (B) priests (C) prince (D) herald
5. That mistletoe that grew upon an oak was considered (A) god-given (B) poisonous (C) beautiful (D) undesirable
6. The Druids believed that mistletoe would (A) poison them (B) cure them if they were poisoned (C) poison trees (D) heal the sacred tree
7. What did the people do with mistletoe in the time of the Druids? (A) they sprayed it (B) they sheltered in it (C) they hung it in their doorways (D) they offered it to the new moon
8. Today people use mistletoe for (A) a Christmas delicacy (B) an antidote (C) a decoration (D) a propitiation

There was a time not long ago when the capital city of the United States was considered a cultural wasteland. This was a special embarrassment, because Washington, D.C., is a host city to a large number of people from around the world. Washington was always a storehouse of interesting American history, but this could not sustain the interest of an international population for very long. One had to travel to New York City in order to find a rich variety of theaters, concerts, and art exhibitions.

Then, by the time of the American Revolution Bicentennial, a remarkable change took place in Washington.

During the last decade, Washington has undergone a cultural explosion. The massive Kennedy Center for the Performing Arts now has many excellent concerts, operas, and plays. Many smaller theatres and galleries also present a rich variety of cultural events. Even historic Ford's Theatre, where Lincoln was shot, has been restored to its former splendor.

Washington is now almost as well-known for its cultural resources as it is for its political events. Perhaps the greatest tribute to this new status is that some plays and art exhibitions open in Washington before they arrive in New York.

1. This story is mostly about the cultural resources of Ⓐ the State of Washington Ⓑ New York City Ⓒ Washington, D.C.
Ⓓ Baltimore
2. Washington has a population that comes from Ⓐ only the United States Ⓑ around the world Ⓒ east of the Rocky Mountains
Ⓓ New York City
3. In the past, Washington's cultural status was considered a Ⓐ variety of riches Ⓑ beehive of activity Ⓒ storehouse of excellence
Ⓓ wasteland
4. Who was shot in Ford's Theatre? Ⓐ George Washington Ⓑ John Kennedy Ⓒ Abraham Lincoln Ⓓ Gerald Ford
5. This writer considers cultural resources to be such things as
Ⓐ restaurants and night clubs Ⓑ concerts and plays Ⓒ professional baseball Ⓓ boating and fishing
6. With what other city is Washington compared in this story? Ⓐ New York Ⓑ London Ⓒ Boston Ⓓ Baltimore
7. Ford's Theatre has been Ⓐ torn down Ⓑ made into a parking lot
Ⓒ moved to New York Ⓓ restored
8. Choose the best title: Ⓐ A National Showplace of Culture Ⓑ The History of Ford's Theatre Ⓒ New York's Night Life
Ⓓ A Storehouse of American History

The pearl, a most beautiful gem, is the result of great struggle and effort. Some foreign substance, perhaps a grain of sand or a germ of some sort, enters the oyster and becomes wedged in between its valves. It proves to be an extreme annoyance, and the oyster attempts immediately to dislodge the particle. Finding its endeavors to be in vain, it proceeds to cover the substance with bicarbonate of lime, known as nacre when found in shells. The constant movements of the oyster rotate the particle, if it has not become attached to the shell. Eventually a pearl of great value may be produced. In striving to overcome its obstacles, the oyster has converted a useless annoyance into a thing of beauty.

1. When an oyster makes a pearl, its aim is to Ⓐ create a thing of beauty Ⓑ cover an irritation Ⓒ produce something of value Ⓓ do something foreign
2. Sometimes a particle becomes Ⓐ caught inside the oyster Ⓑ a valve Ⓒ bicarbonate of lime Ⓓ of great value to the oyster
3. The foreign substance can Ⓐ rotate the particle Ⓑ struggle with the oyster Ⓒ endeavor to be vain Ⓓ annoy the oyster
4. At first the oyster tries to Ⓐ value the pearl Ⓑ expel the foreign matter Ⓒ convert the annoyance into something beautiful Ⓓ attach the object to its shell
5. "Finding its endeavors to be in vain" means Ⓐ it dislodges the particle Ⓑ the oyster is a vain creature Ⓒ its efforts are hopeless Ⓓ it finds the end of the struggle successfully
6. The constant movements of the oyster Ⓐ keep turning the particle Ⓑ dislodge the particle Ⓒ annoy it Ⓓ produce nacre
7. In order for the particle to be completely coated, it must necessarily be Ⓐ fastened Ⓑ wedged Ⓒ useless Ⓓ unattached
8. This selection tells us that Ⓐ there is never beauty without pain Ⓑ we should not cast our pearls before swine Ⓒ something of beauty can sometimes grow out of pain Ⓓ there are always pearls in oysters

No. right
G score

1
5.7

2
6.5

3
7.2

4
7.9

5
8.8

6
9.8

7
10.6

8
11.5

Just as there are powerful currents like the Gulf Stream in the oceans, there are raging streams of air high in the sky. These are called jet streams. One jet stream blows always from west to east over the United States and is about 100 miles wide. This great current of wind usually moves at a speed of more than a hundred miles per hour. Ordinarily it flows five or six miles above the earth, but sometimes it dips as low as two miles.

One day in May, the jet stream collided over the Texas Panhandle with warm, moist air from the Gulf of Mexico, thus producing fifty tornadoes in Kansas and Oklahoma. Frequently the jet stream also causes hailstorms and cloudbursts. When it shifts to the southeast, it pushes Atlantic Ocean hurricanes away from the land. When it does not, hurricanes often rip into the mainland causing great destruction.

Pilots flying eastward have learned how to locate and stay in this jet stream, thus gaining speed with less fuel consumption. Those pilots who fly into the jet stream when traveling westward sometimes make little headway even while flying at top speed.

1. What is a jet stream? Ⓐ gas left by a jet airplane Ⓑ new type of fish Ⓒ air current Ⓓ water current
2. The jet stream can be helpful to whom? Ⓐ engineers Ⓑ doctors Ⓒ lawyers Ⓓ pilots
3. How many miles high does one jet stream usually flow? Ⓐ 2 Ⓑ 5 or 6 Ⓒ 100 Ⓓ 200
4. One jet stream blows from Ⓐ east to west Ⓑ north to south Ⓒ west to east Ⓓ south to north
5. The jet stream collided with warm air over the Texas Panhandle in Ⓐ May Ⓑ August Ⓒ January Ⓓ November
6. The jet stream is helpful to a pilot flying Ⓐ southward Ⓑ northward Ⓒ eastward Ⓓ westward
7. A southeast jet stream Ⓐ increases hurricane size Ⓑ causes hurricanes Ⓒ pushes hurricanes inland Ⓓ pushes hurricanes out to sea
8. A pilot flying eastward in the jet stream Ⓐ uses more fuel and flies more slowly Ⓑ uses less fuel and goes faster Ⓒ uses more fuel and goes faster Ⓓ uses less fuel and goes more slowly

The oldest specimens of glass we know of are Egyptian, and it is quite probable that the land of the Pharaohs was the original home of glass. The glass of early Egypt, usually opaque and colored, was made in small pieces for purposes of adornment. It was also made into vases, tiny vessels, and ornamental figures. Many of these glass articles have been found in tombs six thousand years old.

The ancient Egyptians knew not only how to make glass, but how to make exquisite art glass pieces. They also used glass to imitate precious stones. From its earliest years, glass has led a double life—one of great usefulness and beauty, and one of glittering pretense.

1. The earliest works in glass Ⓐ were clear Ⓑ were precious Ⓒ in the original home Ⓓ were colored
2. The Egyptians used the glass for Ⓐ jewelry Ⓑ building tombs
Ⓒ their weapons Ⓓ a double life
3. What else was made from glass? Ⓐ little bottles Ⓑ glittering homes
Ⓒ specimens of stones Ⓓ Pharaohs
4. The words "six thousand years old" refer to Ⓐ glittering pretense
Ⓑ tombs Ⓒ Pharaohs Ⓓ Egypt
5. We may infer that the Egyptian glass articles Ⓐ could last a long time
Ⓑ lasted a few years only Ⓒ have never been found Ⓓ were not beautiful
6. Glass has always led a double life because of its Ⓐ age and art
Ⓑ opaqueness and transparency Ⓒ colorlessness and colorfulness
Ⓓ usefulness and glittering pretense
7. Which statement is correct? In its early days glass was Ⓐ never made in colors
Ⓑ never useful Ⓒ used to imitate precious stones
Ⓓ always made in large pieces
8. What is the best evidence bearing on the origin of glass? Ⓐ Egypt's houses had glass windows
Ⓑ the oldest glass articles we know were found in Egypt
Ⓒ statements from histories of six thousand years ago
Ⓓ some glassware is marked "Made in Egypt"

Major David Simons went up alone in a balloon until he was 100,000 feet above our earth with 99 per cent of the earth's atmosphere below him. Had his plastic balloon burst, he would have fallen about 19 miles. Had a valve stuck so that he could not let gas out of the balloon, he could not have returned to earth.

At the top of his climb, Major Simons could see all of Lake Michigan, the curve of the earth's surface, and several thunderstorms raging below him. He watched the sun set in clear glory and the stars shine before it was dark.

Awaking from sleep, the major saw the sudden, brief brilliant green flash of the sunrise. It was high time, he thought, to return to earth. As he floated down, he saw that he was settling into thunderstorms. He threw out some ballast and the balloon climbed again. Later, he saw a big hole in the clouds. He let gas out of the balloon and started down once more, but heat from the sun caused the balloon to rise again. This frightened the major. He continued letting gas out of the balloon until, at last, it began a steady descent. Nearly forty-three hours after he had started up, Major Simons landed in a South Dakota field.

1. Which process did Major Simons use to raise his balloon? (A) dropped cans of food (B) let out gas (C) threw out ballast (D) used his steering wheel
2. Once, at least, Major Simons (A) was anxious about his safety (B) had a valve get stuck (C) went through thunderstorms (D) slept while coming down
3. To what height did the balloon rise? (A) 80,000 feet (B) 90,000 feet
 (C) 100,000 feet (D) 110,000 feet
4. How much of the earth's atmosphere was below the balloon when it reached its peak? (A) 100% (B) 99% (C) 98% (D) 97%
5. The sun's heat caused the balloon to (A) rise (B) burst (C) fall
 (D) lose gas
6. Sunrise was a flash of (A) gold (B) blue (C) red (D) green
7. What kept the man up? (A) gas (B) air (C) sun (D) a big hole
8. Major Simons came down (A) after 19 hours (B) in Lake Michigan
 (C) in a field (D) 43 miles from South Dakota

Wherever Mark Twain went, his droll wit won him almost immediate favor. His real name was Samuel Langhorne Clemens. "Mark Twain" is a river term, meaning a depth of two fathoms—twelve feet. He says of it, "It was always a pleasant sound for a pilot to hear on a dark night; it meant safe water."

Born in Missouri in 1835, he left school at twelve to earn his living. As a printer's apprentice, river pilot on the Mississippi, miner, and newspaper reporter, he gathered together much humorous material. *Tom Sawyer* and *Huckleberry Finn* are dear to the hearts of many readers. *The Prince and the Pauper* and *A Connecticut Yankee in King Arthur's Court* have gained him additional popularity. *Joan of Arc* was his most serious work and, in his own opinion, his best. The travel books, *Innocents Abroad*, *Around the World*, and *Roughing It*, keep the reader chuckling.

1. Mark Twain was best known as a Ⓐ traveler Ⓑ humorist
 Ⓒ lecturer Ⓓ pilot
2. The term "Mark Twain" means Ⓐ a pleasant sound Ⓑ two feet
 Ⓒ a turn in the river Ⓓ a depth of twelve feet
3. Mark Twain was Clemens' Ⓐ pen-name Ⓑ book title Ⓒ pilot
 Ⓓ name he was born with
4. He liked the name Mark Twain because of his experience as a
 Ⓐ reporter Ⓑ miner Ⓒ riverboat pilot Ⓓ printer's apprentice
5. *A Connecticut Yankee in King Arthur's Court* refers to a person
 Ⓐ arrested by the police of King Arthur Ⓑ courting the ladies of King
 Arthur Ⓒ playing tennis with King Arthur Ⓓ in the palace grounds
 of King Arthur
6. Which of his books did Twain prefer? Ⓐ *The Prince and the Pauper*
 Ⓑ *Roughing It* Ⓒ *Joan of Arc* Ⓓ *Huckleberry Finn*
7. His travel books were Ⓐ serious Ⓑ amusing Ⓒ written when he
 was twelve Ⓓ mysterious
8. People liked Twain because Ⓐ he was born in Missouri Ⓑ he wrote
 serious books Ⓒ he traveled Ⓓ he was funny

No. right
G score

1
5.1

2
6.0

3
7.0

4
8.0

5
9.3

6
10.4

7
11.8

8
12.9+

In the hamlet of Sweden Valley in northern Pennsylvania is one of the most unusual formations of nature, the Potter County Ice Mine. This ice mine is a hole in the hillside about twenty-five feet deep and ten feet wide. Around its sides, during the hottest of summer weather, hang icicles about six inches in diameter and eight feet in length. During the winter the icicles disappear, and water trickles down the sides of this cave. In other words, nature seems to have reversed herself by freezing water into ice in the summer and melting the ice in winter.

Two explanations are given for this phenomenon of nature, but neither of them is really satisfactory.

The first explanation is that the weight of the hill has compressed ammonia in the depths of the ground, and that the escaping ammonia freezes the water as in the manufacture of artificial ice. However, since no ammonia fumes are detected, this theory does not seem credible.

The second explanation is that the porous rock of the hill absorbs ice-cold air in winter and breathes it out in summer. This theory is more generally believed, but no one is able to explain why rocks should take in air at one time of the year and expel it at another time.

1. The ice mine mentioned above is located in Ⓐ Potter County
 Ⓑ Sweden Ⓒ northern New Jersey Ⓓ southern Pennsylvania
2. Ice melts in this mine in Ⓐ summer Ⓑ fall Ⓒ winter Ⓓ spring
3. The diameter of an icicle means Ⓐ its length Ⓑ its thickness
 Ⓒ the distance around it Ⓓ its weight
4. The hill expels Ⓐ ammonia Ⓑ cold air Ⓒ artificial ice Ⓓ rocks
5. The liberating of compressed ammonia causes water to Ⓐ boil
 Ⓑ thaw Ⓒ freeze Ⓓ evaporate
6. The rocks surrounding this ice mine are assumed to Ⓐ take in air in winter
 Ⓑ take in air in summer Ⓒ never take in air Ⓓ always take in air
7. The first explanation Ⓐ is satisfactory Ⓑ is generally believed
 Ⓒ is undoubtedly true Ⓓ appears incredible
8. The sequence of discussion of the phenomenon is Ⓐ location, explanation, description
 Ⓑ location, description, explanation
 Ⓒ description, explanation, location Ⓓ description, location, explanation

On May 21, 1925, two airplanes, each carrying three men, left Spitzbergen bound for the North Pole. One was commanded by Captain Amundsen, the other by his associate, Lincoln Ellsworth. For eight hours the two planes flew steadily toward the Pole, keeping close together, traveling rapidly, and passing over vast expanses of ice and snow for a distance of more than 600 miles. At last it became necessary to make observations before continuing the flight. Perceiving an open stretch of water, Captain Amundsen gave the order to descend, and the two planes dropped downward. Its motor stopped unexpectedly and the Amundsen plane did not reach the water but crashed into solid ice and was almost wrecked. The Ellsworth plane, which came down three miles away, was damaged beyond repair by a similar accident. The two parties did not meet until the next day, when the drifting ice brought them within a mile of each other. In fighting their way across the ice hummocks to join Captain Amundsen, two members of the Ellsworth crew fell into the sea and narrowly escaped drowning. The temperature was then 12 degrees below zero.

1. How many people were there in the entire party? Ⓐ 8 Ⓑ 6 Ⓒ 2
Ⓓ 600
2. The planes descended Ⓐ to test the gasoline supply Ⓑ because they reached the North Pole Ⓒ because of motor trouble Ⓓ to make observations
3. The landing of the planes was Ⓐ wholly successful Ⓑ successful for Amundsen's plane only Ⓒ successful for Ellsworth's plane only
Ⓓ unsuccessful for both
4. The planes crashed Ⓐ 3 miles apart Ⓑ a mile apart Ⓒ in the water Ⓓ 8 hours apart
5. Which is true? Ⓐ both planes were completely wrecked Ⓑ only Ellsworth's plane was fit for further use Ⓒ only Amundsen's plane could possibly be repaired Ⓓ both planes could be salvaged
6. Because of the floating ice the men of Ellsworth's party were
Ⓐ hindered Ⓑ aided Ⓒ not affected Ⓓ frightened
7. The temperature at this season of the year was Ⓐ mild Ⓑ below freezing Ⓒ extremely cold for this region Ⓓ quite comfortable
8. Two members of the party were Ⓐ lost Ⓑ rescued Ⓒ drowned
Ⓓ starved

No. right
G score

1	2	3	4	5	6	7	8
4.8	5.8	6.9	8.0	9.3	10.5	11.9	12.9+

New York City, with its population of about eight million people, uses more than a billion gallons of water daily. This enormous amount is required to take care of the physical needs of the city as well as the more personal necessities of its people.

When the population was smaller, the water could be obtained from nearby sources. Up to 1917, Manhattan, a borough of New York City, received most of its water supply from the Croton watershed.

When this became inadequate, it was necessary to arrange for an additional supply in the Catskill Mountains. From here the water is collected into several large reservoirs, the largest of which is the Ashokan, ninety-two miles north of New York. This reservoir, capable of furnishing the city with about five hundred million gallons daily, has a capacity of over one hundred and thirty billion gallons.

Mountains had to be tunneled to make it possible for the water to reach the city. The circular tube through which it rushes to New York City has a diameter varying from eleven to fifteen feet and is located many hundreds of feet below the surface. This depth is necessary in the city to safeguard the foundations of buildings and subways.

This engineering feat, which cost almost two hundred million dollars, is comparable to the building of the Panama Canal.

1. How many people live in New York City? Ⓐ a billion Ⓑ 8,000,000
Ⓒ 1,917 Ⓓ 130,000,000
2. The words "physical needs of the city" refer in part to water used for
Ⓐ drinking Ⓑ bathing Ⓒ cleaning streets Ⓓ cooking
3. New York City's water supply is stored in Ⓐ steel tanks Ⓑ cisterns
Ⓒ vats Ⓓ reservoirs
4. The largest reservoir supplying New York City is the Ⓐ Panama Canal
Ⓑ Croton Ⓒ Ashokan Ⓓ Manhattan
5. New York's Catskill water supply comes from Ⓐ a distance of about a hundred miles
Ⓑ New Jersey Ⓒ a distance of about twenty miles Ⓓ Canada
6. Water is brought to the city Ⓐ by subway Ⓑ over mountains
Ⓒ through large, round pipes Ⓓ through ground-level tubes
7. The water travels through a system that is Ⓐ an engineering feat
Ⓑ eleven feet below the surface Ⓒ hundreds of feet in diameter
Ⓓ 92 feet north
8. The water conduits are placed hundreds of feet below street level to
Ⓐ prevent the support of buildings Ⓑ protect them from the elements
Ⓒ avoid interfering with street traffic Ⓓ avoid interference with the supports of buildings

Limited Warranty

57

The Nomistake Electric Typewriter is guaranteed for the period of six months from the date of original purchase to be free from defects in material and workmanship, with the following conditions: that the typewriter has been used as directed by its operating instructions; that no repairs have been made except by factory approved repair workers.

This warranty does not cover damage caused by carelessness or rough handling.

In the event that this typewriter is resold within six months of the original purchase, the warranty can be transferred to the new owner.

Upon notification, the Nomistake Corporation will replace, free of charge, any defective parts if all conditions of this warranty have been met. Should your typewriter require repairs, contact your local Nomistake Repair Center.

The Nomistake Corporation, Boston, MA.

1. The Nomistake Electric Typewriter is guaranteed for Ⓐ all time
 Ⓑ one year Ⓒ six months Ⓓ three months
2. The Nomistake Electric Typewriter is guaranteed to be Ⓐ easy to
operate Ⓑ put together properly Ⓒ unbreakable Ⓓ fool proof
3. For this guarantee to be good, the buyer must Ⓐ pay extra money
 Ⓑ fill in a card Ⓒ follow the operating instructions Ⓓ be a good
typist
4. If something goes wrong with the typewriter, you are supposed to
 Ⓐ write the company in Boston Ⓑ take it back to where you bought
it Ⓒ resell it Ⓓ contact the local Nomistake Repair Center
5. If something is wrong with the way this typewriter was made, the company
will Ⓐ replace the defective parts Ⓑ give you a new typewriter
 Ⓒ give you your money back Ⓓ loan you a new typewriter
6. This guarantee will be no good if Ⓐ you bought the typewriter second
hand Ⓑ the typewriter was dropped on the floor Ⓒ the store where
you bought the typewriter closed Ⓓ you lose the instructions
7. If you try to repair the typewriter yourself, the company will Ⓐ never
repair it Ⓑ charge you to repair it Ⓒ give you new parts free
 Ⓓ tell you how to repair it correctly
8. If all the conditions have been met, the corporation will Ⓐ return your
money Ⓑ change the parts that don't work Ⓒ notify you Ⓓ send
the machine to Boston

No. right
G score

1	2	3	4	5	6	7	8
5.2	6.1	7.1	8.1	9.4	10.5	11.8	12.9+

The oskamalagus smurks a pingoos.

What do you make of this sentence? Actually you do have a certain amount of information. You know that *oskamalagus* is the subject of the sentence. Why? It is preceded by *The* as a signal for a noun, so it is the first noun in the sentence, where you expect the subject to be. You expect the subject to be followed by the verb. You therefore take *smurks* to be the verb, especially since it ends in -s, the sign of the singular present. You know that whatever the oskamalagus is doing is going on at the present time. You expect the word *pingoos* to be a complement (maybe you call it an object) because it follows the verb. You know it represents a single thing or person because it is preceded by *a*, which signals a singular noun.

Thus your knowledge comes down to this: you know that a something is doing something to a something at the present moment. In other words, the sentence has grammatical meaning, and illustrates the great extent to which we rely on sentence patterns in using the English language.

1. What is true about the sentence? Ⓐ it has a subject but no verb Ⓑ it has no meaning Ⓒ it has a subject, a verb, and an object Ⓓ it has poetic meaning
2. Pingoos is Ⓐ a plural noun Ⓑ a singular noun Ⓒ a verb Ⓓ a pigeon
3. The complement Ⓐ follows the verb Ⓑ signals a noun Ⓒ is doing something Ⓓ smurks
4. Oskamalagus is Ⓐ a verb Ⓑ a plural noun Ⓒ a signal Ⓓ a singular noun
5. What is doing the smurking? Ⓐ a pingoos Ⓑ a complement Ⓒ the oskamalagus Ⓓ the sentence
6. The subject of the sentence is Ⓐ a verb Ⓑ present time Ⓒ a noun Ⓓ a plural
7. What indicates the present tense? Ⓐ a pingoos Ⓑ the -s on the verb Ⓒ the -s on the subject Ⓓ the sentence pattern
8. Choose the best title for the lesson: Ⓐ Signals Ⓑ The Oskamalagus Ⓒ Grammatical Meaning Ⓓ Nonsense Words

Two scientists explain that ice ages of the earth have resulted from slippage of the earth's crust. Two other scientists accept this explanation and add a second theory to reinforce it. There is a ridge of submerged land between Greenland and Norway. Over this ridge, the Atlantic Ocean is so shallow that very little of its warm waters get into the ice-locked Arctic Ocean.

As the sun melts the great glaciers of an ice age, water from the melted ice pours into the Atlantic Ocean, raising it a few hundred feet. This causes the warm water of the Atlantic to pour over the Greenland-Norway ridge and melt the ice that covers the Arctic Ocean. During the past fifteen years, the thickness of this ice covering has been reduced about four feet.

There has been little snow in Arctic areas for a long time because the atmosphere cannot get much moisture from a frozen ocean. Once the Arctic is free from ice, snow will again begin to pile up in northern Canada. When it is miles thick, it will begin pushing southward again bringing another ice age to Canada and the United States and heavy rains to the Sahara Desert.

When all this water is locked in glaciers, the level of the oceans will again fall. Then warm water from the Atlantic Ocean will no longer pour over the Greenland-Norway ridge. The Arctic Ocean will freeze over. Snow will cease falling. The glaciers will melt back as they are doing now, and the whole process will be repeated. From one ice age to the next is about twenty thousands years.

1. All four scientists agree that (A) the earth's crust has slipped (B) there will be rain in the Sahara (C) the level of the oceans will fall (D) the whole process will be repeated
2. The Arctic Ocean is (A) miles thick (B) very shallow (C) locked in ice (D) piling up in northern Canada
3. The sun melts (A) the Atlantic Ocean (B) the ocean ridge (C) the atmosphere (D) the glaciers
4. What happened to the ice on the Arctic Ocean? (A) it all melted (B) it was raised a few hundred feet (C) it grew four feet lower in fifteen years (D) it has been covered in deep snow
5. The warm water of the Atlantic (A) melts Greenland and Norway (B) pushes southward (C) freezes over (D) pours over the ridge
6. For a long time, the Arctic areas (A) have been free from ice (B) have had little snow (C) have raised hundreds of feet (D) have much moisture
7. There will be another ice age in (A) the Sahara Desert (B) a ridge of submerged land (C) the United States (D) the Atlantic Ocean
8. Snow will pile up in northern Canada when the Arctic is free from (A) ridges (B) rain (C) ice (D) moisture

How many of us realize the world-wide implications of enjoying a big, juicy steak for dinner? The global ethics of food production and how we eat concern Frances Moore Lappé in her book *Diet for a Small Planet*. World hunger poses a growing threat as populations increase and the earth's agricultural capacity moves towards its limits. Lappé's partial solution to the problem includes changing our dietary assumptions and habits. Sixteen pounds of grain consumed by a steer will yield one pound of beef. Those sixteen pounds of grain and soybeans, if prepared wisely for human consumption, could yield protein of a comparable or higher quality than the beef. Too often foods low on the food chain go unrecognized for the food value they contain. She pioneered the idea of combining two inferior sources of protein, lacking different essential elements, in order to come up with complete and high-yield protein meals. The body can use only a specific amount of protein at one time; beyond that amount, it is wasted. Our habitual excesses deprive others of their basic requirements. Lappé doesn't necessarily advocate vegetarianism. She presents the facts on global production and consumption of life-sustaining protein, and asks us to eat as our consciences dictate.

1. **Frances Moore Lappé's book is on** Ⓐ raising beef Ⓑ population control Ⓒ the ethics of protein consumption Ⓓ dieting
2. **World hunger becomes a threat when** Ⓐ nations take political risks Ⓑ populations increase and new farm land cannot be found Ⓒ we order steak Ⓓ the protein in our food is incomplete
3. **Part of Lappé's solution to the problem is** Ⓐ eating as the Chinese eat Ⓑ conforming to a strict diet without meat Ⓒ weekly fasting Ⓓ revising our dietary assumptions and habits
4. **Sixteen pounds of soybeans and grains** Ⓐ are fed daily to beef cattle Ⓑ yield one pound of beef Ⓒ are less good for you than beef Ⓓ yield an inferior protein
5. **Food low on the food chain too often is overlooked** Ⓐ as a valuable protein source Ⓑ as cattle feed Ⓒ by vegetarians Ⓓ for purely economic reasons
6. **By carefully combining two less valuable sources of protein, Lappé discovered** Ⓐ many new recipes Ⓑ new reasons to eat red meat Ⓒ new essential elements Ⓓ new ways to provide high-protein meals
7. **Too much protein eaten at any one time** Ⓐ is difficult to digest Ⓑ is wasted Ⓒ causes rapid growth Ⓓ causes disease
8. **Lappé believes** Ⓐ we should be vegetarians Ⓑ protein is harmful Ⓒ our eating habits need to be changed Ⓓ we do not get our basic requirements



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